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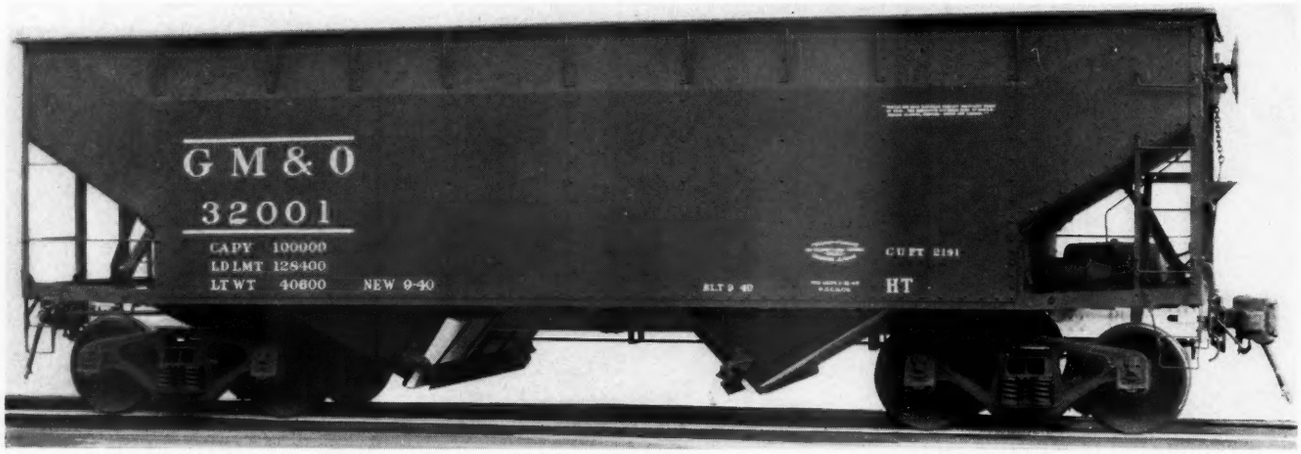

UNIT Truck design incorporates features of brake beam suspension that positively produces economies in first cost and operation of freight cars. The brake beam is supported and interlocked with the side frames eliminating many conventional parts thereby reducing cost of manufacturing and storing extra parts. Brake shoe wear is reduced because of the even distribution of pressure on the wheel, a feature found only in Unit Trucks. And safety in operation is assured, for Unit Brake Beams cannot drop and cause expensive derailments.

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UNIT TRUCK CORPORATION

140 CEDAR STREET **NEW YORK, N. Y.**

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RAILWAY AGE

The Issue—Liberalism Versus Totalitarianism

The principal New Deal argument for the election of President Roosevelt for a third term seems now to be that Roosevelt and Willkie agree on major policies, and that Roosevelt would carry them out better. Conceding, for purposes of argument, that they do agree on some important policies, why claim Roosevelt would carry them out better? On the record, Roosevelt, while the world's most astute and adroit politician, is also its most inefficient and extravagant executive. On the same record, Willkie has had little political experience but has administered the affairs of a large corporation with efficiency and economy. On the record, therefore, the claim that Roosevelt and Willkie agree on major policies is an argument not for Roosevelt, but for Willkie, first, because, being the better executive, Willkie would carry out these policies better and, second, his election would not violate the tradition against a third term.

Willkie and Roosevelt as Far Apart as the Poles

But the claim that they agree on major policies, especially major economic policies, is the most misleading that could be made. They do agree that this country should be put in a condition of military preparedness; that all practicable assistance short of war should be given Great Britain; that certain present farm policies should be maintained, at least as long as necessary to contribute toward restoration of industrial and agricultural parity; that the objectives of certain social policies of the New Deal should continue to be sought; and so on. But there are differences so very great and fundamental in their political and economic philosophies and in the means they would use to achieve their objectives, whether similar or not, as to make the specific points of policy on which they agree inconsequential by comparison.

The most profound and tremendously significant difference between them is that **Roosevelt is a totalitarian and Willkie is a liberal.** Now, the most vital issue with which the people of the entire world are today confronted is that of totalitarianism versus liberalism; and it is because Roosevelt is a totalitarian and Willkie a liberal that the contest being waged under their leadership is the most vitally important that has ever occurred in this country. The *Railway Age* said in an editorial in its issue of July 6, "The real enemy is **magnified governmental power."** A totalitarian is one who believes in the concentration of virtually all economic as well as political power in a central government, or even in a single man, and professes to believe this will best promote the welfare of the people, or at least of the classes with whose welfare he is—or professes to be—especially concerned. This definition of a totalitarian describes Roosevelt. A true liberal, on the other hand, is one who is opposed to the concentration anywhere or in anybody of great power, whether political, economic, or both, because he believes that not government but the people themselves should be almost entirely depended upon to promote their welfare, and that, with some exceptions, the more freedom they have to pursue their own ends in their own ways the better off and happier they will be. And this definition describes Willkie.

There is another great and vitally important difference between the two candidates. Roosevelt believes in the economic doctrine of scarcity, while Willkie believes in the economic doctrine of abundance. That is, Roosevelt believes there can be no further such great expansion of production as has occurred in the past, especially by private industry, and that government policies should be premised on this assumption. Willkie, on the other hand, believes there is just as much possibility of free private enterprise expanding production in the future as there ever was in the past, and that the principal economic duty of government is to keep private enterprise so free from trammels as to afford it opportunity to accomplish the greatest practicable expansion of production.

Upon what do we base these assertions regarding the political and economic philosophies of these two men? Solely upon what they themselves have actually said and done. What has been the most important and significant single act of Mr. Roosevelt's entire administration? Unquestionably, the establishment of the National Recovery Administration (N. R. A.). Strangely enough, many seem to have forgotten about that. They need to be reminded of it. Why was it so important and significant? Because it was the first and greatest single effort ever made to establish in this country a "corporative state" such as had been established already by the communists in Russia and by Mussolini in Italy, and as was just being established by Hitler in Germany; and therefore it most strikingly revealed the trend of Mr. Roosevelt's mind.

What is a "corporative state?" It is one in which

is centralized complete control of all the **economic** activities of the people, and which, in order to maintain complete control of their economic activities, rapidly suppresses all their **political** activities that do not suit it. It is the theory of totalitarianism in action. And the principal purpose of N. R. A. was to abolish competition in naturally competitive industries by (1) having all business concerns and their employees in each industry formulate and adopt under the supervision of a government agency a code of "fair" business practices, of "fair" wages and working conditions and of collective bargaining between employers and employees, and (2) having each code enforced as a law by government. When the codes for different industries were not formulated and adopted fast enough, there was drafted a general code which the government required should be signed by all business concerns not identified with some industry for which a special code had been provided. Significantly enough, it was the act under which N. R. A. was established which also provided the first huge appropriations for government expenditures on public works.

N. R. A. a Parallel to Fascism and Naziism

What did all this mean? It meant a number of important things—among them, that those responsible for N. R. A. had decided free private enterprise, which had caused recovery from all previous depressions, had now become incapable of causing recovery from a depression; that competition had become an inadequate regulator of private enterprise in industries not naturally monopolistic; that government enforcement of competition had become impracticable or insufficient to keep private enterprise really free; and that, therefore, the time had come when government must do much more in every industry than merely enforce competition—that, in fact, the time had come when, in the interest of the people, or at least of the masses, government must regiment and direct all industry, regulate the relations between all employers and employees, and supplement, or actually supersede, private investment with huge government investment.

The Supreme Court destroyed N. R. A. in May, 1935; but attempts by New Dealers to revive and spread its principles and practices have never ceased. Under the Guffey Coal Act price-fixing by government supersedes price-fixing by competition; and nationwide prices fixed under it are just now going into effect. All the New Deal policies which increasingly regulate and tax private business, increase government "investment" in power plants, waterways, highways, and other facilities that compete with private enterprise, and thereby hamper and weaken private enterprise and **increase the ostensible need for government enterprise,** are plainly totalitarian in all their characteristics and objectives. That, while thus promoting totalitarianism, the New Deal also has Thurman Arnold starting prosecutions by wholesale under the anti-trust act to revive competition probably is because the New Dealers hate private business and therefore are sure everything it does must be wrong.

As the warp of the New Deal philosophy is the necessity of increasing governmental control over and participation in industry, so its woof is the necessity of using this increased governmental power to (1) redistribute the national income among the different classes of the people, and (2) restrict production of the goods of which the national income consists. No New Dealer will deny that redistribution of income is their main objective. If any deny that restriction of production is one of their objectives, the answer is the curtailment of agricultural production and reductions of working hours in industry that they have actually put into effect and contend should be kept in effect, regardless even of the demands on industry for increased production for national defense. And whatever the theory or theories upon which they have been based, the actual policies of the New Deal have been most notably successful in restricting the goods and income produced by private industry.

In the seven years ending with 1932, which included three years of the depression, the total income of the American people was 483 billion dollars, while in the seven years under the New Deal ending with 1939, in spite of greatly increased government expenditures and "investment," it was less than 419 billion dollars—a decline of 64 billion dollars, or over 9 billion dollars a year. Did the policies under which this curtailment of production and national income occurred really benefit the "masses," in whose interest they were ostensibly followed, and injure only the "classes?" We shall give data conclusively answering this question a little later in this editorial.

What Is a Liberal, a Radical, a Reactionary?

We have said that the great differences between Roosevelt and Willkie are that Roosevelt is a totalitarian and Willkie a liberal, and that Roosevelt believes economic policies should be based on the premise that the period of great expansion in industry is past while Willkie believes they should be based on the premise that the period of great expansion in industry has only begun. What, then, is a liberal? The *Railway Age* has sometimes divided all people into three classes, radicals, reactionaries and liberals—a radical, in our classification, being a man who wants the government to help the poor; a reactionary being one who wants the government to help the rich; and a liberal being one who doesn't want it to help anybody.

These definitions, while somewhat exaggerated, help to make clear the differences between the views of the different classes regarding the proper functions of government. A true liberal is one who really believes in liberty; and the accepted meaning of the word "liberty" throughout the civilized world when the Constitution of the United States was adopted and for a century

and a half afterward was **freedom from government—all the freedom from government for each person consistent with the equal freedom from it of all other persons.** In the United States until within recent years that meant economically only the amount of governmental interference represented by the Interstate Commerce Act and the Sherman anti-trust law—the former adopted in 1887 to give effect to the English common law principle that natural monopolies should be regulated by government for the protection of the people; the latter adopted in 1890 to give effect to the English common law principle that competition in naturally competitive industries should be enforced by government for the protection of the people.

Under modern conditions a man can favor governmental action going somewhat farther than these two laws go and still be a real liberal. He can, of course, favor whatever governmental action is necessary for national defense. He can favor reasonable expenditures for relief in depressions and reasonable old-age pensions and even reasonable unemployment pensions. But Mr. Willkie is a real liberal who recognizes the fact that a

"Inherent Advantages" of Truck Service

The assurance in the Motor Carrier Act, 1935, that the "inherent advantages" of motor transport would be preserved for public benefit appears, insofar as the motor "common carriers" (so-called, anyhow) and regulatory authority are concerned, to be considered as little more than "window dressing." Outside of New England and by the Keeshin Company, no remarkable effort seems anywhere to have been made by the motor "common carriers" voluntarily to accord the public this constitutional and statutory right. In fact, as a general rule, preservation of the "inherent advantages" dictum seems to have been honored more in the breach than in the observance.

In their failure to bow before this statutory obligation, the motor carriers appear to have been continuously encouraged by the Interstate Commerce Commission and its field force. The most recent example of this regulatory attitude is to be found in the decision of the Commission requiring the motor carriers along the Middle Atlantic Seaboard (at their request) to adopt the admittedly outmoded rail rate structure as the minimum charge for their services.

With the minimum charges thus pegged for many hauls at points far above the actual cost of service, these operators are enabled to concentrate on the traffic providing the most attractive profit, and to abstain from such traffic and such distances of haul as they find less remunerative. In other words, establishing truck rates on this basis enables the truckers to employ to the utmost the "pick-and-choose" technique—and the Commission has become a party to a practice which seems *prima facie* to violate, at least in spirit, the "inherent advantages" provision of the law. The truckers under such a rate structure, do not "pick and choose" the traffic to which true economy entitles them, but they "pick and choose" the traffic which is most remunerative—which, under an artificial rate structure, is something entirely dissimilar.

The Commission has also, by its minimum order, deprived those truckers who did not want to become a party to this basis of rates of their obvious right to obey the spirit of the law. The spokesman for the motor carriers told Congress when this law was being considered that it was the intent of the motor carriers to preserve for the public the "economies and flexibility" of motor transportation. The sponsor of the legislation, Senator Wheeler, told Congress that "inherent advantages" contained in the law meant that truck rates should reflect costs, as nearly as possible, and other conditions of trucking.

One large motor carrier was "spanked" by his colleagues until he was forced to withdraw from his declared intention of giving the public the benefit of the economies of highway transportation and now the Commission is being asked, in M. C. 22, to put the carriers adhering to the New England Bureau over the barrel, and to compel them to withdraw from a system of classification and rates which goes a long way toward reflecting the "inherent advantages" which the law says should be protected. These New England Bureau carriers as a whole are prosperous, and would be more so if the cost basis were more strictly adhered to with respect to volume traffic now moving at less-than-cost commodity rates.

Some dissidents in this territory, though, are apparently tempted by the special privilege "pick and choose" status now being enjoyed by the Mid-Atlantic group with Interstate Commerce Commission approval, and hence are seeking to destroy the New England set-up.

Without such disregard of sound economics and the spirit of the Motor Carrier Act there could have been no such expansion, as there has been since 1935, of unnecessarily duplicative motor carrier facilities at the expense of the national economy. The motor carriers would not be as vulnerable as they are now to rate-making by the railroads, which is entirely justifiable by railroad costs, but which can take all the profit out of many over-expanded truck operations.

A critic has stated that he cannot understand why anyone interested in railroads should object to the decision in M. C. 20, since the decision has the effect of raising their competitors' rates. Our answer to that is that any measure which strengthens competitors in their profitable handling of traffic to which the railroads are economically entitled, is bad for the railroads in the long run—whatever its short-term results may be. Moreover, any arbitrary rate-making policy which fosters duplicative and redundant transportation facilities and which divides traffic between trucks and railroads on an uneconomic basis, has the effect of making all forms of transportation unnecessarily wasteful, thereby *handicapping the whole transportation industry* in its competition with the many and growing substitutes for transportation.

man is not and cannot be a real liberal in the sense formerly meant by that word if he believes that free private enterprise can no longer be depended upon to produce enough to provide increasing necessities, comforts and luxuries for the people; or if he believes government should engage on every hand in competition with private enterprise by the investment of taxes collected from the product of private enterprise; or if he believes that government, instead of promoting competition in naturally competitive industries, should promote monopolies in such industries, with itself as the boss of the monopolies, as the New Deal government did by N. R. A.; or if he believes government should intentionally restrict private production as the New Deal administration has by, at the same time, arbitrarily reducing hours of work in industry and subsidizing curtailment of output in agriculture; or if he believes government should so far interfere with the economically natural distribution of the national income as seriously to restrict increase in the amount of that income produced, as the New Deal administration has done for seven years.

Don't Vote for Willkie If You Oppose a Prosperous and Happy U. S. A.

The policies which Mr. Willkie as a liberal favors usually prevailed in this country throughout the 146 years from the adoption of the Federal Constitution to 1933. Consequently in every decade from that ending with 1829 to that ending with 1929 there were increases in (1) the total production of the country, and (2) the total income of its people. The policies of the New Deal began to be adopted in 1933 after we had had three years of depression; and, as already indicated, the national income under seven years of the New Deal has averaged 9 billion 300 million dollars **less than in the preceding seven years.** Also in the tenth year of the depression, 1939, it was 12 billion 500 million dollars less than a decade before in 1929—the first decade in a century in which it declined instead of increased. These New Deal policies of totalitarianism, redistribution, restriction of production, and so on, were supposed to benefit the masses regardless of their effect on the classes. Have they done so? Evidently not. Total wages and salaries paid in the seven years of the New Deal, 1933-1939, inclusive, averaged 9 billion dollars annually **less** than in the preceding seven years. And total farm income (including government benefit payments) averaged 1 billion 346 million dollars annually **less** in the seven New Deal years than in the preceding seven years.

Isn't the Sample We Have Had of Totalitarianism Enough for Us?

In spite of their agreement on certain specific policies and objectives, there is a difference as wide as the world between the political and economic philosophies of Messrs. Roosevelt and Willkie and between the **most important** policies advocated by them. Mr. Roosevelt's philosophy and principal policies are essentially those of Stalin, Mussolini and Hitler; and under their dominance there have been seven years of stagnation or actual retrogression in this country. Mr. Willkie's philosophy and **most important** policies are those which prevailed during practically all the century and a half preceding the New Deal when this was the freest, the most progressive, the most prosperous and the happiest nation that there ever was on earth. The national election of 1940 will occur exactly one month from the date of publication of this issue of the *Railway Age*. On that date the people will chose between America's leading representatives of totalitarianism and liberalism. It may be a date as fateful of consequences for the American people during the next century and a half as was the date of the adoption of the Federal Constitution during the last century and a half.

Loyal Soldiers, Even If Not in Uniform . . . .

"Did you ever stop to think that whenever we have something that we want done on time and done well, we turn it over to the boys on the railroads? Railroad men in whatever department are the pick of the manhood of the nation. They are trained soldiers, without marks on their sleeves or shoulders. They have discipline; the discipline of comradeship in which each does the job assigned to him. In this army of trained men, the conductor or the section boss or the superintendent doesn't need to carry a swagger stick, or to wear boots and spurs in order to command the respect of men who take orders from him.

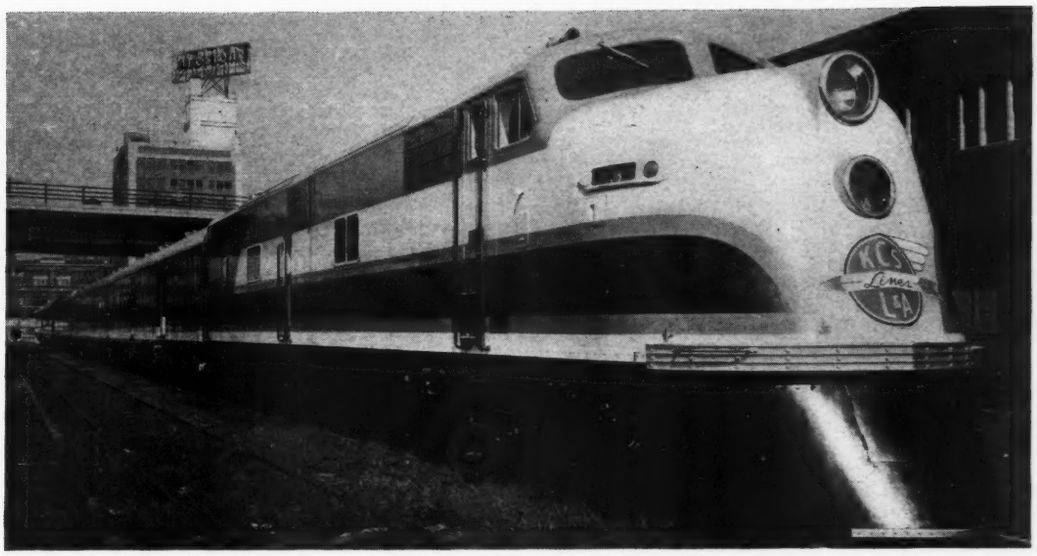
"It was a pleasure to watch them working at both stations the Sunday and Monday that the troops arrived. Never in Sparta's history had there been so many passenger coaches in the North Western yards, or in the Milwaukee yards. Never had such heavy engines turned themselves on the wye tracks in each yard. Sometimes there were only inches to spare. Sometimes the curves were so sharp that the center driving wheels climbed the rails. But always they got the locomotives turned.

"Spectators at the depots saw coaches from roads as remote as the Central Vermont, the Pere Marquette, the Grand Trunk, the New York Central, the Michigan Central, the Wabash, the B. & O., the Rock Island, the Pennsylvania, the Burlington and I can't remember what others, being switched around and sent back home after having arrived with loads of soldiers.

"And all of this these railroad crews did as a part of their daily work, without any grandstand play, without fuss or feathers, without any excitement and without even a cross word. Take off your hats to these veterans, these men who are disciplined without any starch, leather or brass; these men who work with dignity. They have been pretty stiff in the bit now and then, although they use better judgment and see farther beyond the ends of their noses than any labor organization in the world. The officers of their brotherhoods are neither gangsters nor paroled criminals.

"They are men whom the rank and file and the employers and the public respect."

From the Monroe County Democrat, Sparta, Wis.



One of the New Southern Belle Aluminum Streamliners

K. C. S.- L. & A. Streamliner "Southern Belle"

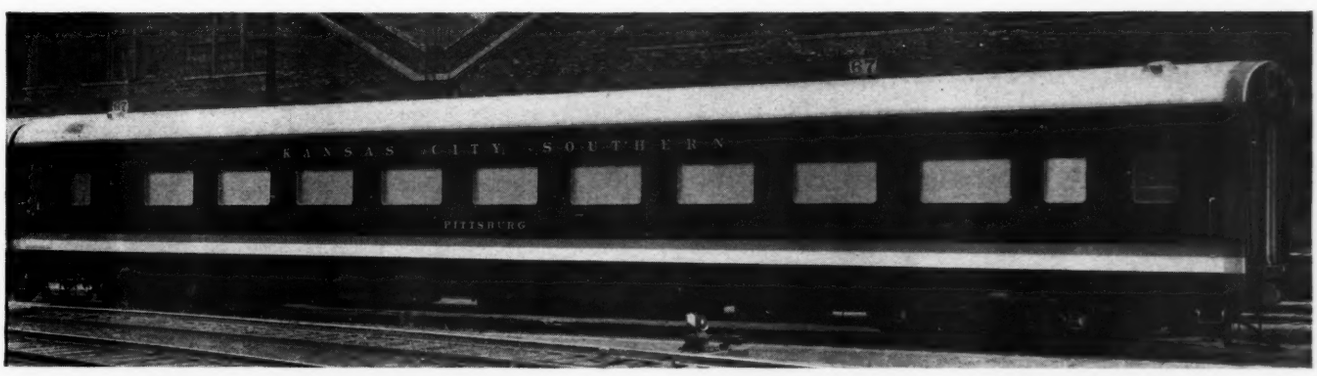
Eleven new aluminum-alloy railroad cars and two Pullmans are used in three four-car Diesel-driven trains

THE new four-car passenger streamliner Southern Belle of the Kansas City Southern-Louisiana & Arkansas Lines was placed in operation between Kansas City, Mo., and New Orleans, La., on September 1. The schedule calls for 25 stops in the 868-mile run between terminals, the overall running time being 21½ hr. and the average speed slightly over 40 miles an hour.

To maintain daily schedules in each direction, three Southern Belle trains are required. Each train consists of a Diesel-electric locomotive, a mail-baggage car, a chair car, a Pullman sleeper, and an observation-parlor-diner car. The single-unit 2,000-hp. locomotives were furnished by the Electro-Motive Corporation. The cars for each train were designed and built by the Pullman-Standard Car Manufacturing Company, strong aluminum alloy being used as the principal structural material to secure a high strength-weight ratio. Individual car dimensions, weights and seating capacities are given in one of the tables.

Streamline Design

Both the exterior and interior of the Southern Belle were designed by Pullman-Standard stylists in close cooperation with Harvey Couch, chairman of the board of the K. C. S.-L. & A. The exterior design presents the latest refinements in structural streamlining, accented by the use of a striking and unusual color scheme. The front end of the Diesel-electric locomotive uses vivid red and yellow for visibility, in contrast to the dark



Individual Cars Are Featured by Straight and Smooth Car Sides, Wide Windows and Brilliant Color Treatment

Furnishings and Decorative Treatment in the Observation Room

green background. The red and yellow are carried in sweeping curves, giving an impression of speed and power, and adding materially to the streamline effect.

The cars have aluminum-colored roofs, with the car bodies in dark green, and carry at the girder sheet a wide yellow stripe with a wide vivid red stripe placed just above. These striping colors are carried in uninterrupted lines from the locomotive, giving the effect of continuity to the train, and by this use of color making a striking and complete unit of the train in its entirety. The aluminum of the roof is separated from the dark green of the car body by a narrow red stripe, and the exterior lettering on the train is in imitation gold color.

Principal Dimensions and Weights of "Southern Belle" Aluminum-Alloy Cars

	Mail—Baggage	Chair Car	Observation—Parlor—Diner
Length over buffers, ft	84½	84½	84½
Width over side posts, ft	10	10	10
Roof height above rails, ft	13½	13½	13½
Truck centers, ft	59½	59½	59½
Truck wheel base, ft	9	9	9
Journal size (roller bearings), in.		5½ by 10 (all cars)	
Seating capacity	..	74	41
Weights, lb.:			
Body light weight	58,900	66,750	67,750
Truck weight (2)	37,300	38,000	38,000
Total light weight	96,200	104,750	105,750
Water, ice, provisions, etc.	2,000	2,000	6,500
Weight ready for service	98,200	106,750	112,250

The interior design of the passenger cars creates an impression of extreme simplicity, coupled with efficiency and good taste in selecting materials and decorations.

Special features of the car equipment include Pullman electro-mechanical air conditioning; large wash rooms and luggage compartment at each end of the chair car, allowing a more advantageous spacing of seats; a day room and secretary's room in the observation-lounge-diner car for convenience of passengers and crew; a settee on one side of the aisle and seats with table on the other in the front part of the chair car for convenience and comfort of passengers; photo-murals in the observation-lounge-diner car and chair cars showing scenes along the route; master radio with speakers in all parts of the train, each speaker equipped with variable volume control; telephone connection for use with regular Bell system during stops along the line; large clock in observation-lounge-diner cars and chair cars; telephone connection between all cars and the locomotive for inter-train communication; private office for conductor at the front of each chair car equipped with desk, cabinet for papers, telephone for communication with engineman and other cars; wash room, including shower bath, for crew in mail-baggage car.

Observation-Lounge-Diner

The observation-lounge-dining car is divided into six main sections, from front to rear: two day rooms, 10 ft. 7 in.; lunch room, 7 ft.; kitchen, 11 ft. 4 in.; dining room, 12½ ft., seating 16; parlor, 17½ ft., seating 17; and observation room, 11½ ft., seating 8.

The observation end is semi-oval with large glass windows to permit wide-angle vision. It contains a built-in circular sofa and four chairs. The chairs have satin-

finish tubular aluminum frames; two are upholstered in jade green seat covering, while the other two and the sofa have contrasting coral fabric upholstery. A circular table, with a top of tan linen-finish Formica with coral inlaid lines, in front of the sofa, permits the easy serving of refreshments in this section of the car. Above the curved door at the rear of the observation room is a radio speaker with volume control. The section is separated from the rest of the car by a full-height partition and sliding door.

The color scheme in the observation section is green. The floor covering through the entire car consists of a heavy raisin-color, two-tone leaf design carpet, laid over a thick rubber floor pad. The baseboard is dark green, with the walls of a medium green, and the ceiling of an even lighter green. A coral-color band is applied on the ceiling at the lighting fixtures, while the molding and trim in this section are of satin-finish aluminum.

A low partition separating the lounge section from the dining section of the car imparts to these sections a feeling of greater length than would otherwise be obtained. This same feeling is accentuated in the color scheme. The baseboards are dark blue, while the walls are medium blue, and the ceilings a lighter shade of blue. The moldings are of satin-finish aluminum, as are the indirect lighting trough and all exposed metal trim. Photo-murals are on all full-length partitions.

The lounge compartment contains soft, roomy chairs and sofas, and a writing desk, mail box, magazine table, and other conveniences. Like the chairs in the observation room, the chairs and sofas have satin-finish tubular aluminum frames; two of the sofas are upholstered in Tacoma blue plush, while a third sofa and one chair have a rich coral textured material for covering.

Set apart from the lounge section by a low partition are two fixed tables with linen-finish Formica tops, and each seating four passengers in fixed cross double seats, upholstered in a Tacoma blue fabric. These seats are designed for the use of parlor-car passengers as well as to accommodate any overflow from the dining section.

The dining section is designed to serve all meals on route. Four fixed tables, each accommodating four passengers, form this section. The chairs are tubular aluminum, with rubber backs and coral-colored fabric seats. The tops of the tables in the dining section are similar to those of the fixed tables in the parlor section.

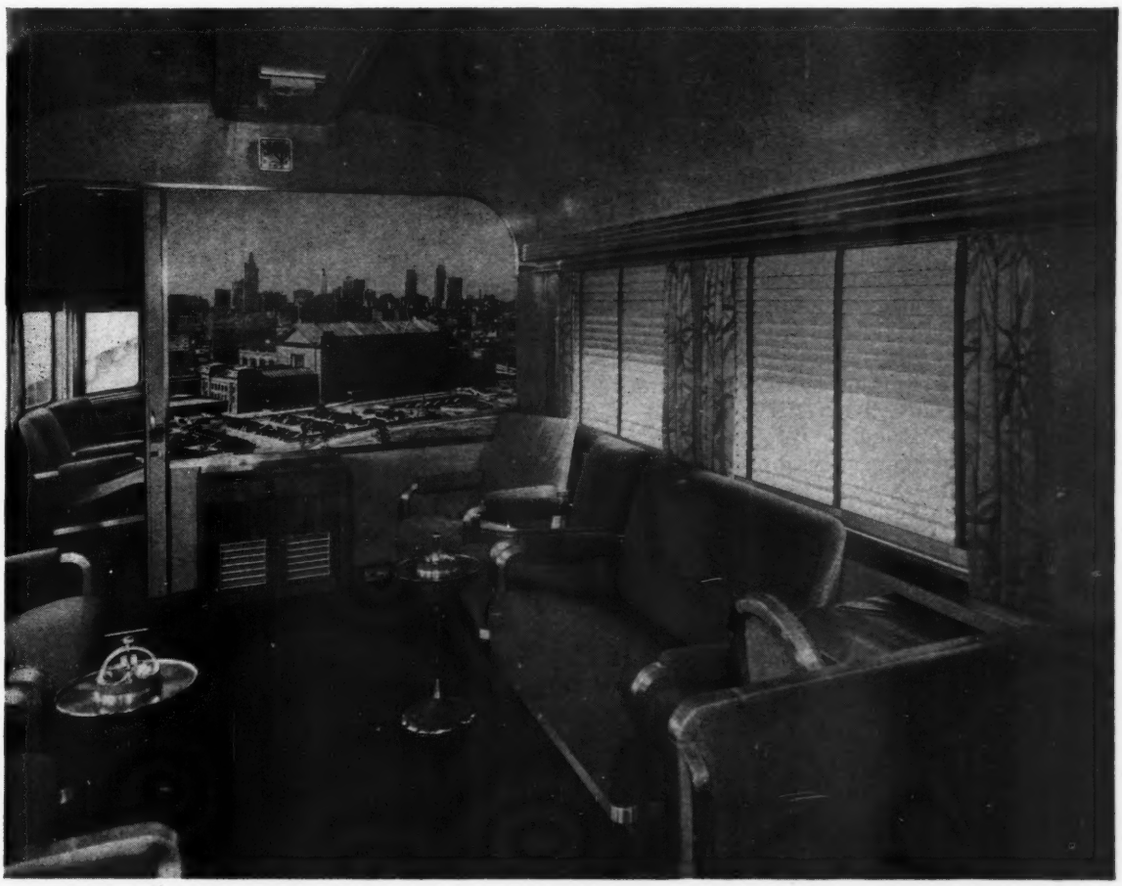
Ahead of the dining section is the kitchen, with all modern equipment for the preparation of refreshments and food for the diner and lunch-room sections. Opening immediately on the kitchen is a lunch counter for the accommodation of coach passengers, where inexpensive meals are served.

In front of the lunch room are two day rooms, one equipped with studio couch, locker, folding washstand, and table luggage rack; and the other with a secretary's desk, chair, locker, washstand, wardrobe, and luggage rack. In the secretary's room is the master radio set that serves all the cars. A loud speaker with variable volume control is in the other day room. A folding partition separates the two rooms.

At the front end of the car is a washroom, and across the aisel from it is a large luggage compartment and clothes lockers.

Venetian blinds with aluminum slats, painted a light tan, are applied to all windows in the observation as well as the parlor and dining sections. The day rooms have curtains of Pantasote. The three observation cars serv-

In the Parlor Section of One of the Observation Cars



Interior of One of the Chair Cars

ing the Southern Belle are named "Kansas City," "Shreveport," and "New Orleans."

Chair-Car Design

Many details designed to increase the comfort and convenience of the passengers have been incorporated in the chair cars which are named "Pittsburg," "Joplin," "Texarkana," "Alexandria," and "Baton Rouge." The seating capacity of each chair car is 74, 56 in the 48-ft. white compartment and 18 in the 17-ft. colored compartment.

Each end of the car has a large washroom for men and one for women. At the front of the car, just back of the washroom, is a private office for the train conductor, equipped with desk, pigeon holes for papers, telephone for inter-train communication, and folding seat.

Just behind the partition separating the white and colored compartments are a table and two seats on one side of the aisle, and a semi-oval settee on the other.

The seats, upholstered in blue fabric, are of the twin revolving type with adjustable backs, each seat being equipped with a foot rest. The seat cushions are of rubber, the back of spring construction. There is an individual ash tray on the back of each seat.

Pantasote window curtains, with blue and tan horizontal stripes, are used in the chair cars. Individual reading lights for each seat, with dim blue night lights, lend a further note of individuality.

There are wide luggage racks in natural aluminum finish running the length of the car to provide ample storage space for passengers' luggage. In addition, there is a luggage compartment at the end of the coach.

A bulletin board in the chair car is placed where passengers can easily read the news items and notices that will be placed there. There is also a mail box for the convenience of the passengers; the train crew will see that all mail placed in it receives the earliest possible attention.

Electrically operated water coolers in each end of the car furnish a supply of cold water at all times.

In the partition at the rear of the chair car is a loud speaker connected with the master radio and equipped with volume control. A large clock is placed in the partition at the front of the car, in such a position that it may be seen from any seat. The inclusion of a clock is an innovation in train service in the territory of the Southern Belle.

In the wall beside each seat is a rack into which a portable linoleum-topped table can be fixed. The tables will be stored in a compartment at the rear of the car and set up as requested by the passengers.

The base color of the chair car on the inside is brown. The wainscoting and upper frieze panels are yellow, while the bulkhead panels at pier-panel height and the piers are blue. The ceiling is a light yellow. The interior of the vestibules is painted light blue. Both the vestibules and car proper have a dark blue marbleized linoleum floor covering.

Mail-Baggage Cars

The mail-baggage car is designed especially for the maximum comfort and convenience of trainmen and includes, among other outstanding features, a shower in the washroom; a bell in the mail room operated by the engineman in the cab to notify mail clerks of the approach of stations; a folding desk in the baggage room, with telephone connection to the locomotive and other cars for inter-train communication.

The baggage-express compartment in the front half of the car is 38 ft. 4 in. long. A partition with a low creep door separates it from the 30-ft. mail compartment, which is equipped with Railway Mail Service racks, compartments, etc., for working mail while the train is enroute. At the front of the mail compartment, on one side, are a steam cooker and a water cooler, while across the aisle is a wardrobe. Large glass windows, reinforced with built-in screen wire, give ample light, and large ventilators on the roof supply plenty of fresh air.

A 9-ft. 9¾-in. section at the rear of the car is designed to supply comfortable sleeping and toilet accommodations for the crew.

Pullman Sleeper

One sleeping car is operated in the southbound train from Shreveport to New Orleans, and another sleeper in the northbound train from New Orleans to Shreveport. The sleeping cars, "Sulphur Springs" and "Siloam Springs," are of the ten-section, three-double-bedroom floor plan.

The interiors of the Pullman cars are characterized by simplicity of line and coolness of color. The open portions of the cars have a light blue-gray ceiling, walls of a medium blue, and wainscoting in a deep hue of bluish gray. The upholstery of the section seats carries out this color plan, the material being horizontally striped blue. Contrast is found in the carpeting which features a sienna-colored leaf pattern.

The women's lavatory follows generally the color treatment in the sections. The walls and upholstery are in blue, and the flooring is marbleized rubber tile. The men's room has identical tile flooring. The walls are painted a neutral tan, and the upholstery is of light brown leather.

The two vestibules in general blend with the interior. Blue is the predominant color, the ceiling having a light shade, the walls a medium, and the end doors a dark blue. Door handles and other metal parts are finished

in satin-finished chromium plate. Rubber tiling like that used in the lavatories makes a colorful floor covering.

Lighting

The chair cars have individually controlled lights placed on the lower side of the basket racks, one light to each seat. In addition to this, and for general illumination, center lights are used at the ceiling and, by a unique lens system, are so designed to focus the light on the aisle only. These lights are glareless to the passengers, even though the passengers may be in reclining positions. Blue night lights are also provided to give further distinction to the lighting system.

Schedule of "Southern Belle", Effective September 1, 1940

Southbound No. 1		Northbound No. 2
Lv. 10:00 a. m.	Kansas City, Mo.	Ar. 7:20 p. m.
Lv. 12:13 p. m.	Pittsburg, Kan.	Lv. 5:07 p. m.
Lv. 12:48 p. m.	Jopkin, Mo.	Lv. 4:33 p. m.
Lv. 1:18 p. m.	Neosho, Mo.	Lv. 4:02 p. m.
Lv. 2:28 p. m.	Siloam Springs, Ark.	Lv. 2:49 p. m.
Lv. 2:38 p. m.	Watts, Okla.	Lv. 2:38 p. m.
Lv. 3:47 p. m.	Sallisaw, Okla.	Lv. 1:35 p. m.
Lv. 4:13 p. m.	Spiro, Okla.	Lv. 1:11 p. m.
Lv. 4:39 p. m.	Howe, Okla.	Lv. 12:40 p. m.
Lv. 4:47 p. m.	Heavener, Okla.	Lv. 12:31 p. m.
Lv. 5:45 p. m.	Mena, Ark.	Lv. 11:38 a. m.
Lv. 6:45 p. m.	DeQueen, Ark.	Lv. 10:28 a. m.
f Lv. 7:45 p. m.	Ashdown, Ark.	f Lv. 9:42 a. m.
Lv. 8:25 p. m.	Texarkana, Ark.	Lv. 9:15 a. m.
f Lv. 9:07 p. m.	Rodessa, La.	f Lv. 8:22 a. m.
f Lv. 9:17 p. m.	Vivian, La.	f Lv. 8:13 a. m.
Ar. 10:05 p. m.	Shreveport, La.	Lv. 7:30 a. m.
Lv. 11:00 p. m.	Shreveport, La.	Ar. 6:50 a. m.
Lv. 12:22 a. m.	Coushatta, La.	Lv. 5:30 a. m.
Lv. 12:58 a. m.	Clarence, La.	Lv. 4:55 a. m.
Lv. 1:42 a. m.	Colfax, La.	Lv. 4:05 a. m.
Lv. 2:30 a. m.	Alexandria, La.	Lv. 3:25 a. m.
Lv. 3:16 a. m.	Mansura, La.	Lv. 2:40 a. m.
Lv. 6:00 a. m.	Baton Rouge, La.	Lv. 12:01 a. m.
Lv. ——	Gonzales, La.	Lv. 11:36 p. m.
Lv. 7:22 a. m.	Carrollton Ave., La.	Lv. 10:38 p. m.
Ar. 7:30 a. m.	New Orleans, La.	Lv. 10:30 p. m.

The same general type of controlled-lens lighting is used in the vestibules, passageways, lunch room and day rooms, and in the observation room. In the lunch room and observation room these lensed ceiling units are arranged in a pattern to follow the room contour of the observation end and the lunch counter contour in the lunch room, and are further accented by satin-finish snap moldings placed on either side, with a distinctive color band in the central portion.

The dining room and lunch room, in addition to the lensed center lighting, have continuous side lighting running from bulkhead to bulkhead, placed just over the windows on either side of the room. This gives a very decorative effect because the light is directed up to the ceiling and down to the dining tables and lounge furniture through translucent plastics. To add further to the appearance, strips of the same plastic material are inserted in the front of the fixture, thus creating luminous lines running the length of the unit.

Construction Details

The 11 railroad-owned cars, consisting of 3 mail-and-baggage cars, 5 chair cars and 3 observation-parlor-diner cars, embody the same general structural design and are made of fabricated aluminum alloys, except for the draft sills, bolsters, end sills, and cross ties, draft lugs and diaphragm post reinforcements, which are of alloy steel. The shell weight of one of the coaches, as determined by track scales, was only 20,113 lb. The car structure is designed to comply with the present requirements of the Association of American Railroads for new passenger cars, including resistance to minimum static end load of 800,000 lb. applied on the center line of draft. The cars are of riveted construction, all exposed rivets being aluminum with mushroom-type heads.

The general type of underframe consists of two main center sills of 12-in. aluminum-alloy channels, reinforced with 5/8-in. aluminum-alloy bottom plate. These center sills extend from bolster to bolster. The bolsters and end construction are welded alloy steel. Floor stringers, false floor and main floor consist of aluminum alloys. The main floor is Pullman arch construction, with Fiberglas insulation, lightweight composition flooring. Linoleum is applied in the chair cars and carpet in the observation-parlor-diner. All threshold plates in all cars are made of cast aluminum, with special anti-skid surface.

The side framing is of the self-supporting type, riveted-girder design, of aluminum-alloy sheets and shapes, with skirts below the side sills separately applied. The vestibule construction for the wide and dummy-type vestibules also is made of aluminum alloys. The turtle-back type of roof is continuous from end to end of the cars, without hoods, except the rear end of the observation-parlor-diner cars, which have a sloping hood to conform to the streamline shape of the train.

The cars are completely insulated with Fiberglas insulation, held in place with aluminum bands. All safety appliances have been provided to meet Interstate Commerce Commission requirements for these types of cars.

The draft gear, buffing device, and drawbars are of the A. A. R. tight-lock type, with integral yoke, designed to absorb lost motion and provide easy starting and stopping characteristics without jerk or jar. The vestibule side doors, of the Pullman pivoted-type, operating in conjunction with trap doors, are arranged to close up and hide the steps when the doors are shut. All steps have aluminum cast surfaces with non-skid feature. Cars are provided with complete rubber closures at the vestibules so as to give the smooth, continuous side effect desired for streamlining. Diaphragm faces are covered with carpet for sound deadening, and all contacting surfaces are insulated to prevent noise.

All interior finish, partitions, bulkheads, sliding or swinging doors, have been insulated or equipped with

How Insulating Materials Are Applied to the Car Interior

anti-squeak tapes to eliminate interior noise. Parcel racks, lighting fixtures and decorative molding are aluminum natural finish.

Trucks

Four-wheel trucks are used on all cars. The trucks are the single drop-equalizer, swing-motion type, with alloy-cast-steel frames of which the pedestals are cast integral. Both equalizer and bolster springs are helical coil design of alloy steel. Vertical motion is controlled by shock absorbers, and truck bolsters are restrained longitudinally by the rubber-cushioned bolster anchor rods. Lateral sway is controlled by the stabilizer arrangement which replaces the conventional spring plank. A. S. F. roller-bearing wheel units are installed using SKF roller bearings. Clasp brakes are of the Simplex Unit-Cylinder type.

Sound-deadening materials are used at bolster springs, truck center plates and body side bearings to isolate truck noises completely from the car body. Sound-deadening materials are also used at moving parts of coupler and face-plate mechanism.

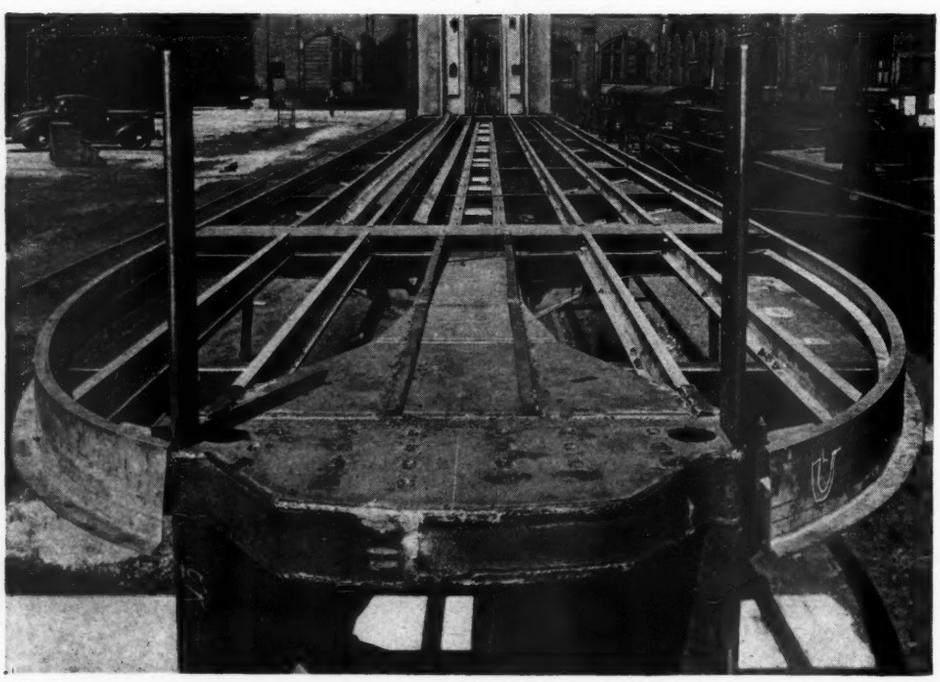
Partial List of Materials and Equipment on the New "Southern Belle" Aluminum Alloy Cars

Aluminum-alloy sheets and shapes	Aluminum Co. of America, Pittsburgh, Pa.
Truck castings and pedestal liners	General Steel Castings Corporation, Granite City, Ill.
Roller-bearing wheel unit; Simplex clasp brakes	American Steel Foundries, Chicago
36-in. steel wheels	Edgewater Steel Co., Pittsburgh, Pa.
Side bearings	Standard Equipment Company, Chicago
Pivoted steps, trap doors, exhaust ventilators, hoppers, journal boxes and electro-mechanical air-conditioning system	Pullman-Standard Car Mfg. Co., Chicago
Tight-lock couplers	National Malleable & Steel Castings Company, Cleveland, Ohio
Combined draft gear and buffer	Waugh Equipment Company, New York
Heating equipment, air-conditioning controls	Vapor Car Heating Company, Chicago
Car axle gear drive	Supergear Drive Corporation, Chicago
Air brakes	Westinghouse Air Brake Co., Wilmerding, Pa.
Telephones	Automatic Electric Company, Chicago
Lighting fixtures	Luminator Company, Chicago. Safety Car Heating & Lighting Co., New Haven, Conn.
Car batteries	Electric Storage Battery Company, Philadelphia, Pa.
Coach seats (4 cars)	Heywood-Wakefield Co., Gardner, Mass.
Coach seats (1 car), magazine table and writing desk	Karpen Bros., Chicago
Observation car seats and chairs	General Fireproofing Co., Youngstown, Ohio
Coach-seat upholstery	L. C. Chase & Co., New York
Observation-car seating covering	Collins & Aikman Corporation, New York
Fiberglas car insulation	Gustin-Bacon Mfg. Co., Kansas City, Mo.
Stonefelt air-duct insulation	Johns-Manville Sales Corp., New York
Self-tapping screws	Parker-Kalon Corporation, New York
Defect-car holders	Railway Devices Company, St. Louis, Mo.
Composition floor covering	Tuco Products Corporation, New York
Presdwood inside finish	Masonite Corporation, Chicago
Outer diaphragms between cars	United States Rubber Company, New York
Window cappings	Caf-O-Lite Company, Muskegon, Mich.
Curtain material	Pantasote Company, Inc., New York
Plymetl partitions and doors	Haskelite Mfg. Corp., Chicago
Baggage-car window sash, basket racks and washstands	Adams & Westlake Co., Elkhart, Ind.
Coach and observation-car sash	Hunter Sash Company, Inc., Flushing, N. Y.
Mail room hoppers	The Duner Company, Chicago
Water coolers, radio and public address equipment	General Electric Company, Schenectady, N. Y.
Push-pull end door locks	Dayton Mfg. Company, Dayton, Ohio
Carpet	Bigelow-Sanford Carpet Company, New York
Linoleum floor covering	Armstrong Cork Company, Lancaster, Pa.
Marbleized counter top	Midgely & Borrowdale, Chicago
Venetian blinds	H. B. Dodge Company, Chicago
Window glass	Libbey-Owens-Ford Glass Company, Toledo, Ohio
Paint	Pittsburgh Plate Glass Company, Milwaukee, Wis.

Locomotives

The Diesel-electric locomotives, with a rating of 2,000 hp. each, are capable of a top speed of 117 miles an hour, but are designed in general to cover fast schedules with low rather than the high maximum speeds. This performance is made possible by the ability of the locomotives to accelerate and decelerate quickly, maintain speed on grades, take curves fast with safety because of their low center of gravity, and because frequent changes of

(Continued on page 478)



An Observation-Car Underframe in Process of Construction

The New Bridge Carrying Tonnele Avenue Over the Main Tracks of the D. L. & W., As Seen From the West. Bergen Tunnel Can Be Seen in the Background

Design and Erection Features Mark This Bridge Job

Reconstructed overhead span on D. L. & W. incorporates unusual application of asbestos-cement plates—Presented interesting construction problems

WHEN a highway bridge across the tracks of the Delaware, Lackawanna & Western at Jersey City, N. J., was replaced recently, a number of innovations were incorporated in the new structure, which included the use of asbestos-cement sheets as forms for concrete jack arches in the deck, these sheets being left in place to protect the concrete against locomotive blasts. Also, because of the presence of the catenary system for electrified suburban operation and the necessity of maintaining vehicular and pedestrian traffic, erection of the bridge presented a number of interesting problems, while the dismantling of the existing structure, a through plate girder span, without interfering with the wires, involved the use of an ingenious sliding platform and of an unusual procedure for removing the girders.

Location of Project

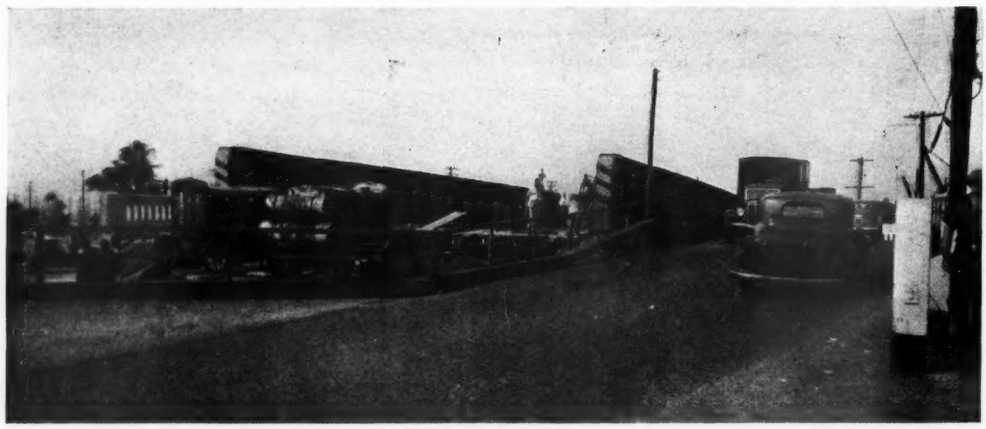
The structure carries Tonnele avenue over the four-track electrified main line of the Lackawanna a short distance from the westerly portal of the Lackawanna's Bergen tunnel. Owing to its proximity at the bridge site to the traffic circle at the approach to the Holland tunnel, Tonnele avenue, which extends roughly in a north and south direction, is a heavily-traveled thoroughfare carrying both local and through traffic. The original bridge consisted of a single through plate-girder span about 110 ft. long, which was supported on stone masonry abutments. It provided a roadway between girders about 33 ft. wide, and a sidewalk outside of each of the girders.

Because of its relatively narrow width, this structure constituted a troublesome bottleneck for highway traffic, and in order to relieve this situation the New Jersey State Highway department obtained authority to replace the bridge with a more adequate structure, using Federal Aid funds, and this work was carried out during 1939, being completed late in the year. The new structure was designed by the railroad's engineering department.

The New Bridge

As contrasted with the bridge that it replaced, the new structure, which is constructed on a skew of 12 deg. 53½ min., embodies two roadways, each 23 ft. 10½ in. wide, which are separated by a center curb, 2 ft. 3 in. wide. There is a sidewalk 9 ft. 8 in. in width on the west side and another 11 ft. 2 in. in width on the east side. Also, the deck includes a pipe platform 6 ft. 4 in. wide beyond the sidewalk on the extreme east side of the bridge, which carries gas and water mains and one or two other pipes. The overall width of the structure is 80 ft. 6 in. A balustrade of concrete construction was provided along each side of the bridge, and a railing of galvanized wrought-iron pipe was installed between the east sidewalk and the pipe platform.

In the interest of economy and as a means of minimizing the depth of the deck, the new bridge was designed as a three-span structure. The main or center span is 66 ft. long between bearings, while the flanking span on the north is 23 ft. 6 in. long between bearings, and that on the south is 17 ft. 3 in. long. The existing abutments, lengthened, repointed and otherwise altered as necessary, were incorporated in the substructure for the new bridge, and, in addition, two intermediate concrete piers were constructed to support the ends of the main span and the adjacent ends of the flanking spans. Each of these piers embodies a continuous concrete footing carrying a line of columns surmounted by a continuous concrete girder. Because the distance between the old abutments was considerably more than was necessary to accommodate the



Looking North at the Tonnele Avenue Bridge While Traffic Was Being Carried Over the Easterly Portion of the New Structure. The Old Plate-Girder Span (At Left) Has Been Jacked Up in Preparation for Being Dismantled and Removed

four tracks, it was possible to insert the intermediate piers and still have ample space between them for the existing tracks.

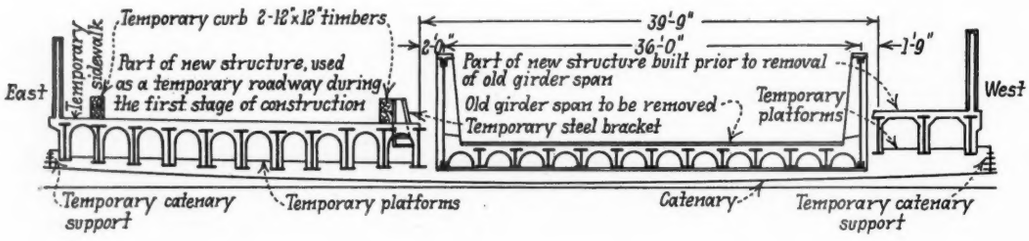
Type of Construction

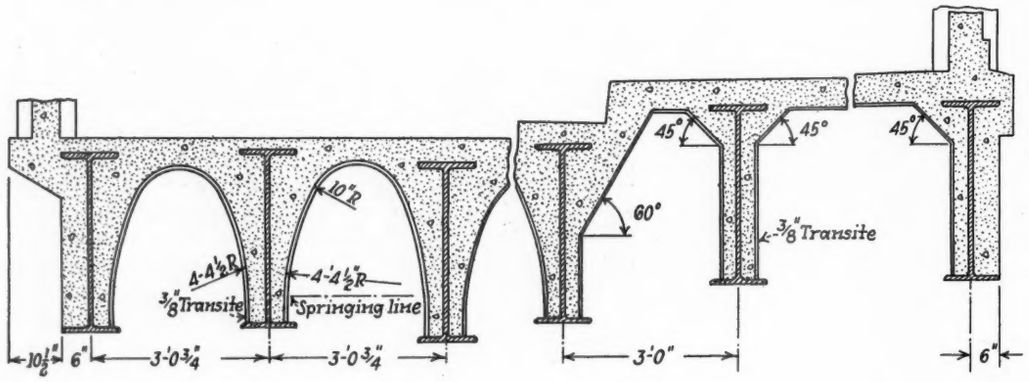
The bridge openings in the new structure are spanned by wide-flange beams extending longitudinally between the piers and abutments. Adjacent beams are stiffened at intervals by means of diaphragms of plates and angles. Except for portions of their bottom flanges, these beams, as well as the diaphragms, are encased in concrete which is monolithic with the reinforced concrete deck. In the main span 36-in. beams are used, while in the north and south flanking spans they are 18 in. and 16 in. in depth, respectively, except for the outside beams at each face which are also 36 in. deep. All beams are spaced 3 ft. ¾ in. on centers except under the sidewalk along the west side of the deck where the spacing is 4 ft. Since the easterly part of the new bridge, including that part carrying the sidewalk and the pipe platform along this side was used as a temporary vehicular roadway after the first stage of construction had been completed, it was necessary to give the beams under the sidewalk and the pipe platform the same spacing as under the main roadway.

In the main span the concrete encasing the beams has the form of jack arches, except under the westerly sidewalk where the encasement has straight vertical lines, with fillets at the angles between the beam encasement and the underside of the deck slab. The latter type of construction prevails also in both of the flanking spans. In placing the concrete encasement and the deck slabs in the latter parts of the structure, conventional forms were used. However, in the main span, where the concrete, if exposed, would be subjected to the damaging effects of locomotive blasts, ⅜-in. asbestos-cement (Transite) sheets were used for the forms and these sheets were left in place as a means of affording the necessary protection. Under the westerly sidewalk, flat sheets of this material were used, but elsewhere in the main span the sheets were curved to give the desired arch effect.

Details of Asbestos-Cement Sheets

As delivered on the job, the curved sheets were so formed that, as viewed from the end, each of them had the appearance of one quadrant of an oval or ellipse. Hence, when two of the sheets were placed on edge on the lower flanges of adjacent girder beams, with their upper edges in contact, an arch of the desired shape was formed. For the most part individual sheets were about 8 ft. in length. Sheets forming the same arch were fastened together and held in proper alinement along their upper (adjoining) edges by means of a series of fastenings, consisting in each case of two flat clips, one

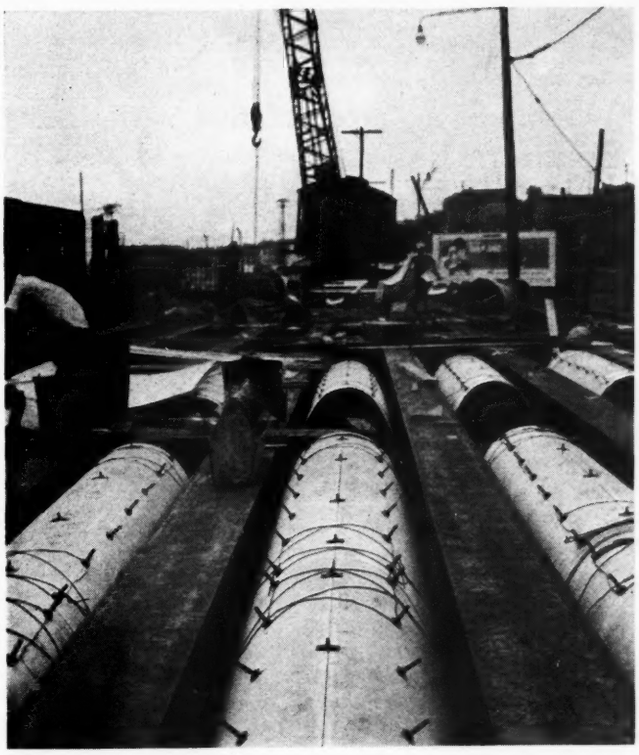




Right, Above — Section at the Tonnele Avenue Bridge During Construction, Showing How the Easterly Portion of the New Structure (Left) and the Westerly Sidewalk Were Constructed Before the Old Span Was Dismantled. Right, Below — Partial Section Through the Main Span of the New Bridge, Showing the Manner in Which the Asbestos-Cement Sheets Were Used

outside the arch and the other on the underside, with a ⅜-in. screw-head bolt extending through them from the under side. A square nut was placed on the protruding end of the bolt and drawn up tight.

To secure the sheets to the concrete, three longitudinal lines of ⅜-in. bond bolts, about 2 in. long, were provided in each sheet and the bolts in each line were placed on 1-ft. 3-in. centers. These bolts were inserted through the sheets from the under sides and were fitted with square nuts on their protruding ends and with the necessary washers. All exposed bolt heads on the under or exterior sides of the sheets were covered with asbestos cement. Lengths of wire were looped around the bond bolts to fasten the sheets together at their upper edges and to the reinforcing steel in the deck. As mentioned previously, flat sheets were used under the westerly sidewalk and these were also fitted with bond bolts in much



Construction View of a Portion of the Deck of the New Bridge, Showing Some of the Curved Asbestos-Cement Sheets in Position

the same manner as the curved sheets. For the use of the workmen engaged in placing the asbestos-cement sheets and to protect the catenary wires, working platforms were provided by laying boards between the bottom flanges of adjacent beams.

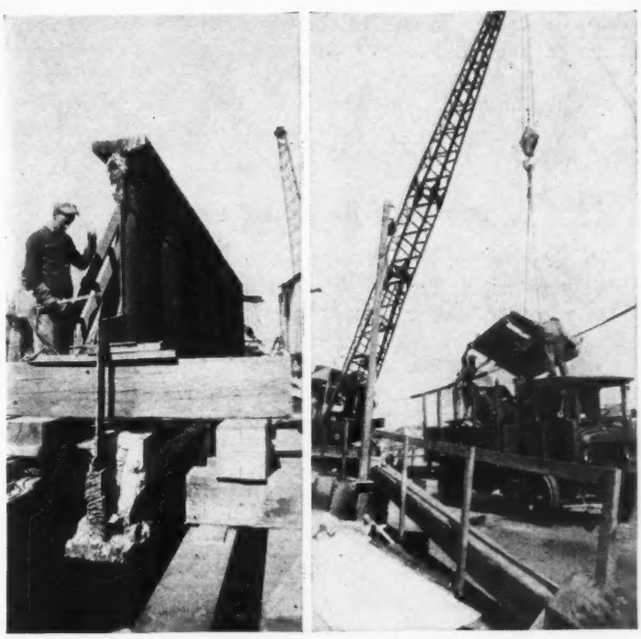
Wrought-iron blast plates were installed to protect the lower flanges of the girders, there being a line of such plates above each track. These plates are of ½-in. material and are bent upward at the edges to protect the edges of the beam flanges. To fasten the blast plates in position, small wrought-iron plates were butt-welded at intervals to their upturned edges, and these plates were, in turn, bolted to the upstanding legs of wrought-iron angles laid on the upper surfaces of the flanges in such a position that the vertical legs are flush with the edges of the flanges. The upturned edges of the blast plates extend slightly above the tops of the flanges, the upper surfaces of the latter being protected by covering them with an asphaltic material.

The new bridge is located directly on the site of the old structure with most of its increased width lying to the east of the latter, except that the westerly sidewalk lies outside of the location of the westerly girder in the old bridge. In erecting the new bridge, the easterly 32 ft. was constructed first and this portion carried all vehicular and pedestrian traffic while the old structure was dismantled and the remainder of the bridge constructed. However, in order to provide a means of supporting the catenary system at the westerly side of the bridge while the old bridge was being removed and the corresponding portion of the new structure was being erected, that part of the latter structure carrying the westerly sidewalk was constructed as the first step in the project. With the catenary wires supported from brackets attached to the outside girder, under this sidewalk, as well as to the outside girder at the opposite side of the bridge, the existing connections with the old structure could be removed.

While traffic was being handled over the easterly 32 ft. of the new bridge a narrow strip along the easterly side of this part of the structure was used as a sidewalk and the remainder was used for vehicular traffic. Between the temporary sidewalk and the roadway, a timber guard was provided, consisting of two 12-in. by 12-in. timbers, placed one above the other, which were bolted through the concrete to the top flange of one of the girders. A somewhat similar guard was provided along the opposite side of the roadway except that here the timbers were not only bolted to one of the girders but were backed up by brackets, constructed of structural sections. Each of these brackets extended down between two of the girders where it was riveted to a channel extending transversely between the beams. When the remainder of the bridge had been completed, these brackets were removed by burning them off at the surface of the concrete deck.

The Sliding Platform

Preparatory to being dismantled, the old bridge was jacked up an amount sufficient to permit the insertion of a platform under the structure as a means of protecting the catenary wires from falling debris during the removal of the deck of the old structure. As mentioned at the outset, this platform was of the sliding type, being



Left—Showing How the Old Plate Girders Were Supported by Needle Beams While Being Cut Into Sections. Right—Loading a Section of One of the Girders Into a Truck

so designed that it could be moved along to keep pace with the dismantling work. It was 13 ft. long, measured parallel with the center line of the bridge, and embodied a support at each end by means of which it was hung from the top flanges of the two plate girders of the old bridge.

In each of these supports an 8-in. by 16-in. timber was placed transversely across the tops of the girders, this timber being of sufficient length to overhang the latter members at each end. Inserted through each end of the transverse members were two 1¾-in. steel rods, each of which was threaded at both ends. The rods in each of the transverse beams were provided with take-up nuts at their upper ends and served as hangers for an 18-in. wide-flange beam placed transversely under the girders in the plane of the timber beam. The lower ends of the hanger rods extended through both the upper and lower flanges of the wide-flange beams and were provided with hexagonal nuts, there being three nuts to each rod, one above and two below the lower flange of the beam. The nuts were placed in the rods on the top sides of the lower flanges to prevent the rods from slipping down and fouling the wires. To provide a working platform, 2-in. planks were laid between the lower flanges of the two wide-flange beams.

To supplement the hanger bolts, a ⅞-in. steel cable, fitted with turnbuckles, was looped around each overhanging end of the 8-in. by 16-in. transverse timbers and the corresponding wide-flange beam. Also the supporting structure for the platform was stiffened by three 1-in. steel rods, enclosed in 3-in. pipe sleeves, extending between the transverse timber beams, and by 1-in. rods extending between the wide-flange beams. In addition, sway bracing was provided in the form of two 4-in. by 4-in. by ½-in. angles placed diagonally between the hanger rods on each side of the platform. To facilitate the work of shifting the platform, a skid board was placed on the top flange of each of the plate girders.

The movable platform was assembled between the pier and the abutment at the north end of the bridge, and was moved out over the tracks, being shifted forward by successive steps as the work of demolishing the deck proceeded toward the south end of the structure. As a means of stabilizing the platform while the demolition work was under way, wooden shims were driven between the lower flanges of the plate girders and the top flange of the 18-in. beam at each corner of the structure. In removing the old deck, all the floor beams were cut out except one near each end, these being left in place to hold the girders in position while they, in turn, were being dismantled.

Removing the Old Girders

Another interesting aspect of this project was the manner in which the old plate girders were dismantled. Here again it was necessary to safeguard the catenary wires, and to this end a special procedure was devised for dismantling those portions of the girders that were situated directly over the tracks. In this work holes were burned in the webs of the girders at about 8-ft. intervals and needle beams, consisting of 8-in. by 16-in. timbers, were inserted in these holes. To provide support for the blocking that was provided under the ends of the needle beams, a steel beam, spanning between the new concrete piers, was placed on each side of the girder.

With the girders supported in the manner described above, it was possible to dismantle them piecemeal by cutting them into relatively small sections with oxy-acetylene torches, the sections being loaded into trucks by a crawler-mounted crane operating from the completed portion of the new bridge. The upper portion of each girder was removed first, the horizontal cut being made on a line slightly above the mid-point in the height of the girder. Above this line the member was cut into sections about 16-ft. long, but when the lower portions were removed they were cut into 8-ft. sections. Before the cutting of each section was commenced, the crane hook was attached to that particular section and the line tightened. After the old girders had been removed the remaining portion of the new bridge was constructed.

As mentioned previously, the new bridge at Tonnele avenue was designed by the railroad, under the general direction of G. A. Phillips, chief engineer, and under the direct supervision of J. L. Vogel, engineer of structures, and Meyer Hirschthal, concrete engineer. It was constructed under the supervision of the New Jersey State Highway department, of which Morris Goodkind is bridge engineer. J. P. Burns, Dumont, N. J., was the contractor on the project. E. Knudson was the engineer in charge of the work for the contractor.

K. C. S. - L. A. Streamliner "Southern Belle"

(*Continued from page 474*)

locomotives are not necessary nor are frequent stops made for fuel and water. The locomotives have high initial tractive force which promotes fast and smooth train starting.

Provisions for the comfort of the engine crew include deeply upholstered, adjustable seats, the one on the engineman's side being so that the control levers are readily accessible. Special acoustical treatment insulates the cab from engine-room and outside noises, making it possible for the engineman and fireman to converse without appreciably raising their voices—another feature contributing to safety because of the greater ease in exchanging signal observations.

A Vapor-Clarkson automatic oil-burning boiler in the rear of the locomotive supplies steam heat for both the locomotive and passenger cars. Each locomotive carries 1,100 gal. of train-heating boiler water and 1,200 gal. of fuel. With a full supply of fuel, boiler water and sand, the total weight of each locomotive is slightly less than 300,000 lb. It is 71 ft. long, 14 ft. above the rail and about 10 ft. wide.

* * *

Here Is a Strange Station Combination. The Yonkers (N. Y.) Terminal of the New York Central's Putnam Division Is Located at the Third Story of the City's Leading Bank

More Than 30,000 Persons Attended the Launching

P. M. Launches World's Largest Lake Car Ferry

Addition of S. S. City of Midland 41 to Lake Michigan fleet reflects importance of this link in rail transportation

THE S. S. City of Midland 41 of the Pere Marquette was christened and launched in the yards of the Manitowoc Shipbuilding Company at Manitowoc, Wis., on September 18. More than 30,000 persons, including townspeople, who declared a holiday for the event, and public officers, industrialists, shippers and railway officers from various parts of the country watched the world's largest lake car ferry slide down the ways. In addition, directors and officers of the three railroads comprising the Chesapeake & Ohio Lines and a delegation of executives of the Dow Chemical Company and the Midland Chamber of Commerce were transported from Ludington to Manitowoc on another of the P. M. ferries to attend this event.

Helen A. Dow, daughter of Willard H. Dow, president and general manager of the Dow Chemical Company, Midland, Mich., sponsored the ship and named it after that city, an important industrial center on the P. M. Preceding the launching, a luncheon was tendered guests by the shipbuilder, at which W. C. Hull, vice-president in charge of traffic of the C. & O. and P. M. and A. P. Rankin, vice-president of the Manitowoc Shipbuilding Company were the principal speakers.

While the launching occurred on September 18, the vessel will not be placed in service between Ludington and Manitowoc until January 1. This is due to the fact that because of its height the vessel had to be launched before completion. The two upper decks will now be constructed and engines, equipment and furnishings will be installed.

Besides being the largest lake car ferry afloat, 406 ft. overall with a 58-ft. beam and a molded depth of 23½ ft., the City of Midland boasts of several unusual features. She is the first vessel on the Great Lakes to be constructed with a reinforced double-water-bottom hull that is divided into eleven water-tight compartments, any one of which will keep the vessel afloat. She will be powered by 6,000 shaft h. p. twin uniflow steam engines, the largest of this type ever constructed, and will have a speed of 18 m. p. h. Steam will be generated by four water tube boilers, fitted with economizers and superheaters of a guaranteed efficiency.

The ship's public spaces will include luxurious accommodations for passengers, with furnishings in the modern manner. She will have large dining rooms and lounge accommodations along with 74 passenger staterooms, including 12 master staterooms or parlor suites with private shower and toilet facilities, and two smoking rooms, one for women and the other for men.

The large dining salon, situated foward on the main or second deck, will accommodate sixty persons at a time. It will be appointed with furniture of stainless steel framework, having white satin finish and blue green leather covering, harmonizing with leather covered doors and a light-colored treatment of the walls. This salon will be served from an adjoining modern galley, all-electric in its equipment. The galley will have an efficient refrigerating plant of large capacity. Provision for dogs —one of the luxury requirements of modern travel— has not been overlooked, for the ship will have steel kennels for their accommodation.

The quarters of the officers and crew will be on the upper or third deck, that of the officers being immediately below the Captain's. The latter's stateroom, divided into sleeping quarters and office, will be situated just aft of the ship's pilot house. The ship's radio room, outfitted

with the latest sending and receiving equipment, will be part of the purser's quarters at the rear of the main passenger deck.

The City of Midland will have a carrying capacity, per trip, of 34 loaded freight cars, 50 automobiles and 376 passengers. The arrangement of space for the transportation of passenger automobiles and the method of handling them mark another innovation in carferry construction. Space for automobiles will be on the upper deck, and not the car or first deck as in the case of the sister ships, City of Flint and City of Saginaw, built in 1929 and 1930. The autos will be loaded on board the City of Midland by means of a special ramp. This will leave the car deck free for freight cars exclusively, increasing the ship's capacity for both autos and freight. The ship will have four railroad tracks on her main deck. The railroad cars will be loaded and unloaded at the stern.

P. M. Ferried Freight in 1875

The P. M.'s car ferry operations on Lake Michigan are an evolution of its freight ferrying service that was started in 1875 by the Flint & Pere Marquette, one of its predecessors, when it made arrangements with a privately owned side-wheel steamer to interchange traffic at an improvised dock at Ludington. In 1876 the railway constructed a pile dock at Ludington with an adjacent warehouse. With this arrangement freight was transferred by hand from cars to the boat—"break bulk" handling.

During the years between 1876 and 1882, the Flint & Pere Marquette routed all its lake freight via an existing "break-bulk" line on the lake because of its own lack of boat equipment. However, in 1881, the railway management decided it should own and operate its own facilities for cross lake freight service, and accordingly made contracts for the building of "break-bulk" boats. In September, 1882, two wooden steamers, known as F. & P. M. No. 1, and F. & P. M. No. 2, were delivered to Ludington for cross lake service in connection with the rail line. In 1883 the volume of business to be ferried exceeded the capacity of steamers F. & P. M. Nos. 1 and 2, and to remedy this situation the two boats were taken to Detroit, and lengthened to afford greater carrying capacity. The boats were cut in the middle, and 36 feet of additional length was built in, amidships. The railway purchased dockage at Milwaukee in the year 1887, to provide proper terminal facilities at that point.

The delivery of the first two steamers, in 1882, was followed by receipt of F. & P. M. No. 3, in 1887, F. & P. M. No. 4, in 1888, and F. & P. M. No. 5 in 1890—all wooden "break bulk" boats. In 1895, the idea of building a boat onto which railway freight cars could be run materialized to the extent that the F. & P. M. ordered a steel car ferry. This boat was delivered and put in service February 19, 1897. She was first known as "Pere Marquette," and in later years was designated as "Pere Marquette 15."

On January 1, 1901, a railroad consolidation brought into being the Pere Marquette Railroad, absorbing, among others, the line of the Flint and Pere Marquette, mentioned above, and the Chicago and West Michigan which operated a ferry between Muskegon, Mich., and Milwaukee, Wis. This 300-ft. wooden car ferry was built in 1895, at Toledo, Ohio, was christened "Shenango No. 2," and was used from 1895 to 1897 for transporting freight cars between Conneaut, Ohio and Port Stanley, Ont. The C. & W. M. bought the craft in 1897 and changed her name to "Muskegon." Following the 1901 consolidation, the "Muskegon" became the "Pere Marquette 16," in the service between Ludington and Milwaukee. She was retired in 1907. In 1901 two more steel car ferries, P. M. 17 and 18, were constructed and placed in operation, thereby creating a fleet of four ferries. In 1903, two more steel car ferries, P. M. 19 and 20 were constructed and the use of package freighters was discontinued. In 1907, P. M. 16 was sold to the Goodrich Lines.

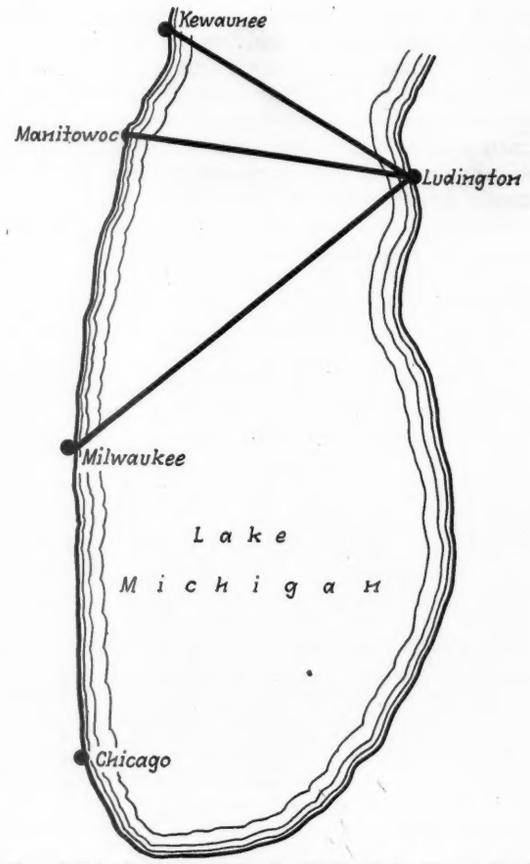
The fleet was increased to six in 1911 by the addition of P. M. 21 and to seven in 1924 by the addition of P. M. 22. In 1929, P. M. 15 was retired and the construction of the City of Saginaw 31 in that year brought the total to seven. In 1930, the addition of the City of Flint 32 increased the fleet to eight. In 1938, P. M. 20 was sold to the state of Michigan to be converted into an automobile ferry and in 1940, P. M. 19 was sold to a boat line which is using it as a barge.

With the completion of the City of Midland the fleet will consist of seven car ferries, two of which each now make a round trip daily between Ludington and Manitowoc. The City of Midland will make three boats in this service. One makes a round trip daily between Ludington and Kewaunee and three make daily round trips between Ludington and Milwaukee.

Seven Ferries Shorten Distance to East

The function of the car ferries is to extend P. M. service across Lake Michiagn and thereby create advantages to shippers as well as the railroad. The saving in mileage from Manitowoc to Buffalo, N. Y. over the ferry-rail route is 170 miles compared with the all-rail route via Chicago while the saving in time is often as much as 24 hours. The reliability of the car ferry service is demonstrated by the fact that in the last 17 years there has not been a single day when at least one P. M. ferry did not cross the lake.

Ludington is the base of operations and here the fleet



A Round Trip Is Made Daily by Each of the Seven Ferries

is dispatched, supplied and serviced. Its short wave radio station is in constant touch with all ferries and shore stations. Repairs and inspections are made in a dry-dock elsewhere. The marine store room at Ludington is equipped with refrigeration for the storage of perishables for the crews and passengers.

Food for more than 400,000 meals a year is handled by this store room.

The car ferries are operated on fixed daily schedules providing for a sailing time of 4 hr. to Manitowoc, 4½ hr. to Kewaunee and 5¼ hr. to Milwaukee. Train operations on both sides of the lake are adjusted to them so as to provide fast transportation. In addition to this arrangement, the P. M. operates two fast trains daily from Ludington to Buffalo which, with connecting lines, provide third morning delivery between the Twin Cities and New York.

The Launching Party Included: Miss Barbara Gilroy, Girl Friend of the Sponsor; R. J. Bowman, Vice-President of the P. M.; Mrs. Willard Dow, Mother of the Sponsor; G. D. Brooke, President of the C. & O. Lines; Helen A. Dow, the Sponsor; and Willard H. Dow, Father of the Sponsor

2,400 Freight Trains Carried Across Lake

The magnitude of the fleet's operations is reflected in the traffic handled in 1939. It consisted of 100,738 freight cars, 18,724 automobiles and 60,536 passengers. This is the equivalent of the operation of 2,400 freight trains across the lake each year. In handling this traffic, the boats averaged 75,000 miles a year, with the City of Flint holding the record of 100,000 miles in one year when it made 1,010 trips of 100 miles each between Ludington and Milwaukee.

In the days of the "break bulk" ships, the largest portion of the traffic consisted of grain from Milwaukee, which was then an important grain market, to eastern points and ports. Today grain is still an important commodity but its relation to the total traffic is dwarfed somewhat by increased shipments of practically all other products, many of which originate beyond the shore line. As a result of improved service, the direction of traffic has changed from a preponderance eastward to a balance of 55 per cent eastbound and 45 per cent westbound. The eastbound traffic includes a large amount of grain and grain products from the west, lumber and lumber products from the Pacific northwest and other products, including perishables. Much of this traffic is for export. Fresh meat, for example, leaves Madison daily for export from New York. Westbound, time freight including perishable food shipments, has grown rapidly. Coal, which once moved in volume, now is handled occasionally.

Passenger traffic has grown rapidly during recent years due to increased automobile travel and a lessening of steamer competition. In 1924 the total number of passengers handled in and out of Ludington was only 6,901. In 1939 it was 60,536. This increase was due to a large extent to the addition of facilities for handling automobiles and adjustments in fares. Today the fares are as low as $3 for a round trip from Ludington to Kewaunee and Manitowoc and $3.50 to Milwaukee, with a berth rate of $1.50 and a flat rate of $5 for an automobile.

Another factor was the retirement of privately owned Pere Marquette Line steamers between Milwaukee and Ludington which carried passengers and automobiles and which interchanged freight with the Pere Marquette railroad.

Seasonal Variation in Passenger Revenue

WASHINGTON, D. C.

THE Interstate Commerce Commission's Bureau of Statistics has made public a study of seasonal variation in railway passenger revenue and passenger miles of the Class I roads by districts during the 1923-1940 period. The study covers 37 mimeographed sheets, most of them occupied by tabulations of the data and charts; it is Statement No. 4037 and was prepared by E. S. Hobbs and M. B. Foote.

After explaining the statistical methods employed, the study has this comment to make on the data which it reviews:

Passenger Revenue is a composite series, composed of three major series which are coach (other than commutation) revenue, parlor and sleeping car revenue, and commutation revenue. The same classification applies to passenger-miles. These series may vary in trend as to one or all of their component elements, i.e., long time, cyclical, seasonal and random elements. In measuring seasonal variation of total passenger revenue or miles by districts there is an apparent changing season which is largely due to the changing importance of these major series.

On the other hand, when seasonal data by districts are combined to obtain results for the United States as a whole, opposite variations in pattern have a cancelling effect. This study was undertaken primarily for the purpose of analyzing and interpreting the returns in the monthly reports of revenues and expenses in which a separation between coach, sleeping and parlor car, etc. is not shown. The separation of rail passenger-miles between coach and reserved cars now appears in monthly I.C.C. reports but not for a sufficient number of years for use in the present study.

There has been a definite shift in seasonal variation in passenger revenue since 1923 as reflected in the seasonal adjustment factors.

Only in May and December have all three districts shown the same tendency—a lowering of the seasonal adjustment factors in May and a raising in December. In the month of November the factors show a downturn in both the Western and Southern districts, but in the other nine months, the seasonal adjustment factors in the Western district show a movement in a different direction from those in the other two districts.

In the Eastern and Southern districts, it appears that the winter months have become relatively more important than formerly as producers of railway passenger revenue, and the summer months correspondingly less important. An increase in winter travel to Florida and loss of local passenger business could explain such a change. On the whole, there has been much less change in seasonal variation in the Eastern district than in the Southern and Western.

On the other hand, the changes in the Southern district have been more extreme than in the other two.

In computing the seasonal adjustment factors, use was made

of the 12-months' moving average method commonly employed by statisticians for this purpose.

Each month of each year was given its own seasonal adjustment factor. By applying such factors to the unadjusted daily averages, the indexes adjusted for seasonal variation were obtained.

Seasonal variation for the three districts as a whole was not computed separately as in the case of each of the three districts.

The All-districts indexes adjusted for season represent a composite based on the three district daily averages adjusted for season.

To illustrate the range in seasonal variation in the three districts, the seasonal adjustment factors for passenger revenue in 1939 are given.

The range is greatest in the Southern district, extending from 84.0 in May to 124.0 in February, and least in the Eastern district where the minimum was 89.5 in March and the maximum 110.5 in August. The range in the Western district was somewhat less than in the Southern district, but the minimum was in March rather than in May as in the Southern district and the maximum in July instead of February in the Southern district in which the showing is attributable as previously indicated to an increase in travel to Florida.

The maximum and minimum adjustment factors for passenger-miles occur in the same months as in the case of passenger revenue. While the range in the passenger-mile factors for the Eastern and Western districts is greater than for the corresponding passenger revenue factors, the reverse is true for the Southern district in which the maximum factors occur in February, 124.0 for revenue and 115.0 for miles, and the minimum in May, 84.0 for revenue, and 85.0 for miles.

The revenue per passenger-mile by months appears to vary more or less systematically in different seasons of the year, reflecting among other things the effect of periodically reduced rates. Since 1933, when the railway fares per mile were first put on a lower level in coaches than in sleeping and parlor cars, the monthly change in the revenue per passenger-mile is affected not only by changes in the mileage fare, but also by changes in the composition of the traffic as between coach passengers and sleeping and parlor car passengers. At all times, some effect in the change of revenue per passenger-mile may be due to greater or less proportion of passengers traveling at half-fare.

An inspection of the data indicates that the maximum revenue per passenger-mile may be expected in winter and the minimum in summer. No maxima or minima appear in June or November, and the only appearance of extremes in May and October (minima in Eastern District) was random in character, while April appears but once (1937 in Western district) with the same maximum as January and February.

The revenue per passenger-mile adjusted for season was obtained by dividing the seasonally adjusted revenue by the seasonally adjusted passenger-miles. Originally designed as a check on the adjustment of season in the revenue and passenger-miles it also serves to indicate the basic trend in passenger fares unobscured by seasonal fares.

TRANS-CANADA AIR LINES, air transport subsidiary owned by the Canadian National and the Canadian Dominion Government, will receive delivery of the first of six new aircraft from the Lockheed Aircraft Corporation on October 31. The second will be received on November 6, two others later in the month, and the last two in December. The new planes will have accommodations for 14 passengers and a crew of three, as compared with accommodations for 10 passengers in the present craft. The new ships are nearly 50 ft. long, and have a wing span of 65.5 ft. and a height of 11 ft. 10.5 in. Two 1,200-hp. engines will give the new aircraft a cruising speed of 232 m. p. h. and a maximum speed of 263 m. p. h.

The new planes will be used in transcontinental service and on the recently-established route between Toronto, Ont., London and Windsor. New features include shatterproof glass windows, individual reading lights over each seat and equipment for the serving of meals aloft by the stewardess.

Communications . . .

Decries G. M. & O. Merger

NEW YORK, Oct. 1, 1940.

TO THE EDITOR:

The universally praised merger of the Mobile & Ohio and the Gulf Mobile & Northern was totally wrong. These two roads are direct competitors over much of their routes, as any one can see from a map, and never should have been merged. The Mobile & Ohio belonged to the Southern Railway System, while the Gulf Mobile & Northern belonged to the Frisco System and Burlington route. Charges of inefficiency or malfeasance, if true, should be brought against the members of the Interstate Commerce Commission and judges who have destroyed two competing systems for a monopoly.

CITIZEN

[We do not ordinarily publish anonymous letters. This one, however, shows such a fundamental misconception of the nature of the railroad business, and of the serious difficulties faced by the railroads, that a departure from our usual practice is justified in order to draw attention to these misconceptions. The railroads, by nature, can function most efficiently only under conditions of limited competition or partial monopoly (for a discussion of which our correspondent is referred to any standard textbook on transportation economics). Any dangers to which such limited competition among railroads might subject the public are amply safeguarded against by the elaborate machinery for railroad regulation. Indeed, it is only such limited competition which justifies regulation at all. If the railroads should be required to compete with each other, as our correspondent believes they should be, then there exists no excuse for regulation. A persuasive case could be made for recognizing competition among railroads, and hence ceasing to regulate them, but almost nobody proposes that that be done. If the railroads are going to be regulated as partial monopolies, then there is no excuse for also requiring them to compete to the utmost with each other.

The *Railway Age* has never been an advocate of wholesale, compulsory consolidation of the railroads into a few systems. On the other hand, faced as the rail carriers are by *competition of subsidized agencies of transportation,* it is necessary for their very survival that they be allowed to *consolidate or take any other steps* which appear likely to reduce the costs of providing railroad transportation service. Only by reducing their costs in every possible way can the railroads hope to retain traffic from competitors whose costs are paid in large measure by the taxpayers.—EDITOR.]

Train Dispatchers Need Training for Their Jobs

CHICAGO.

TO THE EDITOR:

In the September 7, 1940, issue of the *Railway Age,* L. Alfred Jenny, Lt. Col. Engineers Reserve, replied to what he considered as a criticism by C. E. Smith of a former communication by the Lieutenant Colonel concerning the latter's contention that the railroads were unprepared for military operation. In his letter herein referred to the Lieutenant Colonel said, "Our railroad personnel is not trained to handle military transportation as is required in modern war . . . until these fundamentals are fully understood we do not not even begin to be prepared." He further said that, "We must be prepared to meet any emergency on short notice with at least our initial requirements and then build up as fast as we can."

The foregoing has a direct bearing on the subject matter of this letter which I shall begin with the question: "Is that portion of our railroad personnel adequately trained to 'meet any emergency on short notice' which performs the very important functions necessary in expediting train movements, namely, the train dispatchers of the American railroads?"

That the functions they (the train dispatchers) perform are important to efficient and economical operation has been openly

acknowledged by high railroad officials. One of these was E. E. Calvin, at one time vice president, Union Pacific, who stated for the public record that if there is any officer, subordinate officer or employee of a railroad who must be infallible, that individual is the train dispatcher. No serious-thinking railroad officer will deny the importance to efficient operation of a well-trained train dispatcher, but practical experience in the field by the writer is responsible for the statement that most carriers are not giving the attention to training of men about to be promoted to function as train dispatcher that would enable the new train dispatcher to have the training to "meet any emergency" promptly, and effectively cope with it.

In the September, 1940, issue of "The Train Dispatcher" C. L. Darling, president, American Train Dispatchers Association, writes that during the last decade there has not been sufficient attention given to the problem of keeping train dispatching staffs well manned. He said that the depression forced the younger men off train dispatching positions and left only the older (more experienced) men doing the work, and that this gave the railroads the very best train dispatching service, perhaps better than in any like period. This is, of course, a fact which cannot be denied, since those older men who were retained in service had many years of train dispatching experience which fitted them to take over and handle train movements over theretofore unheard of mileage. However, Mr. Darling points out a further fact, namely, that the older men are rapidly passing out of the picture and their places are being filled by younger and, of course, less experienced men, and that men with no (prior) experience are being promoted to these positions.

According to recent statistics issued by the Interstate Commerce Commission, excluding the number performing only the weekly relief service, a total of 720 trick train dispatchers are on duty at one time directing train movements on the 138 Class 1 carriers who report operating 233,187 miles of railroad. Dispatching territories consolidated during the depression are still consolidated for the most part and, in most instances, the greater mileage then turned over to the reduced force is still being dispatched by the same reduced number of train dispatchers. The older and experienced men were, in a measure, able to do the work with safety, but many younger man are unwilling to assume these responsibilities, and insufficient opportunity for proper training for the work is one of the reasons.

In many other industries employees are given intensive training for advanced positions by serving an apprenticeship. In other departments on railroads men are carefully trained in the intricacies of the higher positions before they are called on to assume these greater responsibilities. We feel that carriers are not affording sufficient opportunity for men to receive adequate training in the art of train dispatching before the individual is called upon to undertake that responsibility. In directing the movement of all trains operating over his territory the train dispatcher must, together with other clear knowledge, have a very correct mind-picture of practically every foot of that territory. He must know the speed each train not only should but actually can make, dependent, of course, on the tonnage hauled by the locomotive. He must have that knowledge so that he may, as is demanded of him, make instantaneous or snap-judgment decisions in his issuance of orders or instructions to train and engine employees or others engaged in train movements.

Not only is efficient operation dependent upon his having that knowledge and ability, but so is the safety of human beings who are on trains dependent on that qualification. Still, it is not unusual for an individual to be "qualified" as a train dispatcher and put to work as such after he has been examined on the Book of Rules of the Operating Department, is found to have a passable knowledge of the physical characteristics of the territory, and has "sat in" by performing the mechanical functions of marking the train sheet, etc., while the experienced man actually does the dispatching of trains. Is it any wonder that men whose training is so limited become confused when emergencies arise shortly after he is left alone to function as a train dispatcher? Delays, or even worse conditions, arise as a result, and the "new man" is demoted for inefficient performance.

It would seem that in this highly specialized work of train dispatching it would be to the interest of efficient operation, and especially in preparing for the transporting of men and material incident to the preparedness program, if prospective train dispatchers were given full opportunity to undergo training which would, when they take charge of the job, enable them to meet and cope with the varied and intricate problems that constantly arise in their work. The old adage, "Practice makes perfect" can well be applied here. Before the inexperienced train dispatcher has handed over to him a job of dispatching trains, and after he has passed an examination on rules and physical characteristics of the territory, etc., he should begin his training by "sitting in" with an experienced train dispatcher as his tutor to learn and master the rudiments of recording necessary information on the train sheet so that he may readily find the correct "holes" in which time of trains at reporting offices and other information may be shown.

It would be most helpful if he devoted not less than one week to performing these mechanics of the job while his tutor, the experienced train dispatcher, did the actual dispatching of trains, since this would afford the student opportunity to see, hear and learn and, we trust, remember *how* to handle this or that situation. This should then be followed with the student dispatcher actually dispatching trains *but* under the constant supervision of the experienced train dispatcher under whom he has thus far studied. Two weeks of the latter type of training would give him at least some practical experience prior to being assigned to handle the job on his own responsibility.

Men trained in any field of endeavor always are better fitted to cope with problems, and the efficient dispatching of trains, whether it be in ordinary times or in preparing for emergencies, presents problems which can be effectively coped with only by those who have had sufficient training either in the school of experience or under sufficiently long tutorage under an experienced train dispatcher. With such men directing train movements over railroads of this nation, with the fundamentals fully understood by them, the railroads will have personnel, at least in this important branch, trained to meet any emergency on short notice.

O. H. BRAESE,
Secretary-Treasurer,
American Train Dispatchers Association.

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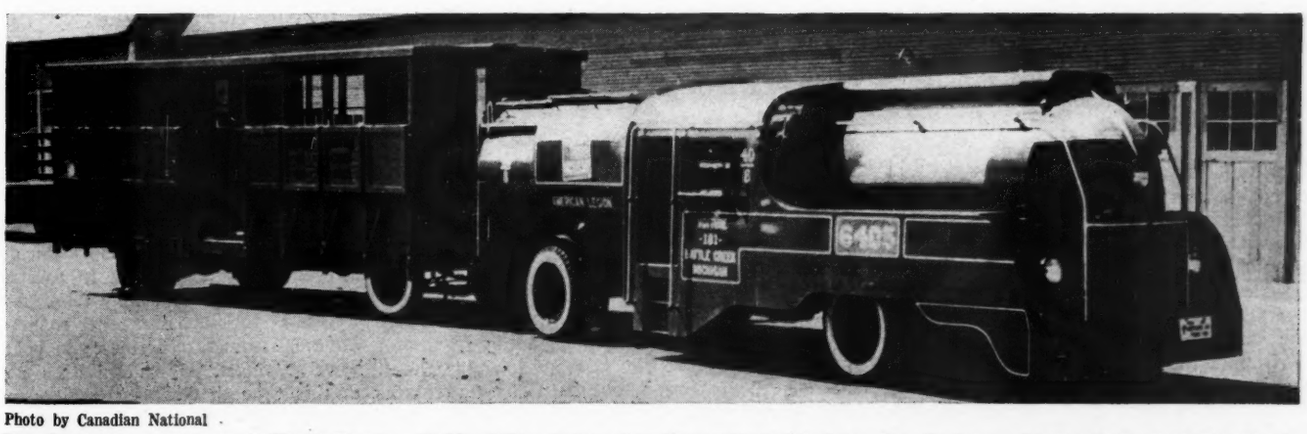

Photo by Canadian National

This Model Locomotive and "Eight Horses—40 Men" French Box Car Were Constructed for the American Legion Post at Battle Creek, Mich., by Shopmen of the Canadian National Located There. The Units Appeared in the Legion Parade in Boston, Mass., Last Week

NEWS

Seeks Shipper Aid in Car Situation

Kendall asks for cooperation like that which brought results last year

Because of the "excellent results" obtained through a similar communication issued last Fall, W. C. Kendall, chairman of the Car Service Division, Association of American Railroads, on September 26 sent to all members of the Shippers Advisory Boards a letter outlining the car situation and calling upon shippers and receivers of freight to cooperate in various ways "to the end that maximum utilization of the available car supply may be obtained." At the same time Mr. Kendall sent to all railroads a circular calling attention to the shipper letter and suggesting that "if car requirements this Fall are to be satisfactorily met, roads must 'brush out the corners' to, in every possible way, prevent lost car days, and increase car efficiency."

The shipper letter first notes the "gratifying" response to the similar communication of last year, citing such results as the "new high record" of miles per car per day achieved in October, 1939, and the 1939 average load of carload freight—36.8 tons, "the best ever attained." The assistance given by shippers is said to have "contributed substantially to the attainment of these results and to the successful handling of the sharpest increase in traffic within so short a time ever experienced by the railroads."

"Today," Mr. Kendall went on, "conditions justify a renewal of this appeal for your active cooperation in promoting economical and efficient car utilization. While the total volume of car loadings in September and October may not greatly exceed the loadings during the corresponding period last year, the nature of the traffic is putting a strain upon the freight car supply. The rapidly expanding demands of the national defense program are resulting in greatly stimulated requirements, particularly for lumber and other construction materials. Much of this is long-haul traffic, which added to a substantial increase in transcontinental traffic due to a reduction in intercoastal vessel operation requires greater service from the car supply than indicated by a comparison of the volume loaded. Steel production is at capacity and export freight, which causes more than average car detention even when handled currently, is running in volume close to records established in the last war."

Next the Car Service Division chairman tells the shippers that there have been installed "in the last year" 66,838 cars built new, in addition to rebuilt and repaired cars; and as of September 1, the net increase in serviceable cars, compared with September 1, 1939, was 77,235, including 20,607 box cars and 59,163 gondolas and hoppers. Moreover, 18,458 new cars were on order as of September 1. "It is believed," Mr. Kendall added, "that we cannot do better than to ask renewed adherence" by shippers to the recommendations originally incorporated in last Fall's letter. One of these recommendations, "which it is believed deserves particular consideration at this time is that shippers relax somewhat the more technical requirements as to car condition, and cooperate to the fullest possible measure by utilizing without rejection cars furnished by the railroad, if such cars have been approved by the railroad mechanical inspector for the commodity to be loaded."

Other items "in which shippers and receivers can be helpful" are: Aid in the observance of Car Service Rules that cars may be forwarded promptly to the owners in order to maintain a well-balanced car supply; order cars as much in advance as possible, specifying type, size, destination, routing and commodity to be loaded; refrain from reloading cars released at plants where such loading is not in accordance with Car Service Rules, and unless au-

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Railroad Research Theme of New A. A. R. Film

The importance and accomplishments of railroad research both by the carriers themselves and by manufacturers and the effect of standardization on the country-wide network are featured in a new 25-minute sound-slide film entitled "Behind the Scenes" which the Association of American Railroads has just made available for showing to railroad employees and the general public. Duplicate copies of the production are being sent to those member roads which have the equipment necessary to show sound-slide films. A tabloid reproduction of scenes in the film is also being prepared and will be supplied for distribution to audiences after the film itself is shown.

Thurman Arnold Vs. the Oil Cos.

Trust buster claims producers have violated Elkins and Sherman Acts

The Department of Justice on September 30 filed a complaint in the United States District Court for the District of Columbia against 22 major oil companies and their subsidiary and affiliated companies, and one trade association, the American Petroleum Institute, charging, among other things, that the defendants "have conspired to charge excessive rates for the use of crude oil and gasoline pipelines and to receive back as refunds and rebates on the rates charged to themselves a substantial part of the revenue from pipeline operations," thus constituting a violation of the Elkins Act. Also, under the general allegation that these companies have conspired to fix and maintain uniform, noncompetitive prices to be paid by them for the crude oil purchased from independent producers, and to be charged by them for crude oil sold to independent refiners in violation of the Sherman Anti-Trust Act, the complaint further charges that the defendants have "conspired to cause railroads to establish and maintain rates favorable to them and unfavorable to independent refiners."

The present suit does not ask the court for an order requiring divestiture of the ownership of the pipelines, tankers, tank cars and other transportation facilities at this time, but the complaint does contain a prayer for "general relief with respect to organization, functioning, and operation of the defendants, as the court may deem proper." Originally, the Department of Justice had intended to ask for a decree requiring divestiture, but after receiving a report from tht National Defense Advisory Commission pointing out that such an order might have adverse effects on the country's present rearmament efforts, details of which were outlined in last week's issue, it decided to forego a prayer for this specific type of relief. However, the entire question of the operations of the oil industry will be before the court during the trial and it is impossible to foretell what form the final decree may take. Attorney General Jackson, in a letter to Senator Gillette, Democrat of Iowa, did point out, however, that "this action does not seek at this time to compel the oil companies to get rid of their pipelines, barges,

(*Continued on page 493*)

8 Months N. O. I. Was $366,257,827

2.34 per cent return compares with $269,187,186 or 1.72 per cent last year

Class I railroads of the United States in the first eight months of 1940 had a net railway operating income of $366,257,827 which was at the annual rate of return of 2.34 per cent on their property investment, according to the Bureau of Railway Economics of the Association of American Railroads. In the first eight months of 1939, their net railway operating income was $269,187,186 or 1.72 per cent, and in the first eight months of 1930, it was $545,262,898, or 3.45 per cent. The August net of the Class I roads was $66,014,798 or 2.42 per cent, compared with $54,567,356, or 2.01 per cent in August, 1939, and $94,327,471, or 3.33 per cent in August, 1930.

CLASS I RAILROADS—UNITED STATES

	1940	1939	1930
Month of August			
Total operating revenues	$381,426,782	$344,399,562	$460,973,773
Total operating expenses	267,504,672	247,621,627	323,571,474
Taxes	36,982,166	31,202,663	31,747,043
Net railway operating income	66,014,798	54,567,356	94,327,471
Operating ratio—per cent	70.13	71.90	70.19
Rate of return on property investment	2.42%	2.01%	3.33%
Eight Months Ended August 31			
Total operating revenues	$2,743,251,822	$2,480,961,970	$3,572,873,894
Total operating expenses	2,026,989,779	1,890,327,881	2,701,718,583
Taxes	263,416,977	233,340,428	240,197,403
Net railway operating income	366,257,827	269,187,186	545,262,898
Operating ratio—per cent	73.89	76.19	75.62
Rate of return on property investment	2.34%	1.72%	3.45%

Gross operating revenues for the first eight months of 1940 totaled $2,743,251,822 compared with $2,480,961,970 for the same period in 1939, and $3,572,873,894 for the same period in 1930, and an increase of 10.6 per cent in 1940 above 1939, but 23.2 per cent below 1930. Operating expenses for the eight months amounted to $2,026,989,779 compared with $1,890,327,881 for the same period in 1939, and $2,701,718,583 for the same period in 1930—7.2 per cent more than the former, but 25 per cent below 1930.

Class I roads in the first eight months of 1940 paid $263,416,977 in taxes compared with $233,340,428 in the same period in 1939, and $240,197,403 in the same period in 1930. For July the tax bill of the Class I roads amounted to $36,982,166, an increase of $5,779,503, or 18.5 per cent above August, 1939. Twenty-one Class I roads failed to earn expenses and taxes in the first eight months of 1940, of which six were in the Eastern district, five in the Southern district, and 10 in the Western district.

Gross for August amounted to $381,426,782 compared with $344,399,562 in August, 1939, and $460,973,773 in August, 1930; operating expenses totaled $267,504,672 compared with $247,621,627 in the same month in 1939, and $323,571,474 in August, 1930.

Class I roads in the Eastern district for the eight months had a net railway operating income of $219,924,699, or 2.83 per cent. For the same period in 1939 their net was $156,919,249, or 2.02 per cent, while in 1930 it was $297,728,078, or 3.92 per cent. Gross of the Class I roads in the Eastern district for the eight months totaled $1,386,435,580, an increase of 15 per cent compared with 1939, but a decrease of 22.5 per cent compared with 1930; operating expenses totaled $985,457,507, an increase of 10.6 per cent above the same period in 1939, but a decrease of 26.2 per cent under the first eight months of 1930.

The August net in the Eastern district was $34,887,664 compared with $29,413,884 in August, 1939, and $44,949,205 in August, 1930.

In the Southern district the net for the eight months was $42,824,186, or 2.16 per cent; for the same period in 1939 it was $41,399,624, or 2.09 per cent, and for the same period in 1930 it was $54,190,288 or 2.56 per cent. Gross in the Southern district for the eight months amounted to $351,177,787, an increase of 7.6 per cent compared with the same period in 1939, but a decrease of 20.3 per cent under the same period in 1930. Operating expenses in the eight months totaled $269,296,812, an increase of 8.7 per cent above the same period in 1939, but a decrease of 23.2 per cent under 1930.

Class I roads in the Southern district for August had a net of $5,354,802 compared with $5,000,869 in August, 1939, and $5,820,065 in August, 1930.

Class I roads in the Western district for the eight months had a net of $103,508,942, or 1.75 per cent. For the same period in 1939 their net amounted to $70,868,313 or 1.2 per cent, and for the same period in 1930 it was $193,344,532 or 3.17 per cent. Gross in the Western district for the eight months amounted to $1,005,638,455, an increase of 5.9 per cent above the same period in 1939, but a decrease of 25.1 per cent below the same period in 1930; operating expenses in the eight months totaled $772,235,460, an increase of 2.7 per cent compared with the same period in 1939, but a decrease of 23.9 per cent under the same period in 1930.

For August alone the Class I roads of the Western district had a net of $25,772,332 compared with $20,152,603 in August, 1939, and $43,558,201 in August, 1930.

Status of R. F. C. Rail Loans

The monthly financial statement of the Reconstruction Finance Corporation as of August 31 shows disbursements to railroads (including receivers) of $772,541,805 and repayments of $264,791,846.

It Won't Happen Again Says Buford

A. A. R. operations chief tells shippers proper use of roads will preclude state control

A co-ordination of governmental and all manufacturing activities that will be carried on during the execution of the nation's defense program will prevent a recurrence of a clogged transportation machine experience in 1918 when consignees' facilities were inadequate to receive shipments and release cars, according to C. H. Buford, vice-president of the Operations and Maintenance Department of the Association of American Railroads, at the luncheon of the forty-sixth regular meeting of the Pacific Northwest Advisory Board at Spokane, Wash., on September 20. "Based on the reports made by W. G. McAdoo, director general of the railroads, after his careful analysis and experience in handling the railroads, it is the conclusion that our World War difficulties were not due to a lack of transportation facilities, but were the result of a failure of government agencies and business generally to use the railroad equipment and plant for transportation purposes," Mr. Buford continued. "Taking sufficient freight cars to fill five tracks extending from New York to San Francisco and loading them with commodities that could not be unloaded, thereby tying up more than 400 million dollars' worth of equipment, was more than the plant could stand.

"Why, then, were the railroads taken over by the government and business generally allowed to continue under private management? It must be assumed that people generally in the United States were not sufficiently social-minded to permit the government to take over private industry and operate it even in a war period. On the other hand, it was recognized that adequate transportation must be provided if the country was to endure, and about the only way to control and co-ordinate all of the government agencies that were competing for transportation through the abuse of priority orders was to set up a central agency that could bring about the necessary co-ordination.

"In the sense that these results were desired, they were accomplished by the United States Railroad Administration. During its operation and for a short period thereafter, industry in this country paid the highest freight rates it has ever known. On top of this, it has paid its part of increased taxes to make up the deficit of more than $1,616,000,000 that resulted from government operation.

"The previous experiment in government operation of railroads was so expensive and unsatisfactory that all parties, including government, business and the railroads, should endeavor to so plan and organize that it will not be necessary to try it again. I am glad to be able to tell you that the railroads and the War Department have been working for years on various plans, and have definite agreements as to methods to be used to prevent any

delay in the movement of government freight either in peace-time or in war.

"I conceive a preparedness program to be a peace-time strengthening of our national defense, proper training of personnel and needed plant expansion so we could pick up a war load on short notice. Our preparedness program should be developed as rapidly as orderly procedure will permit and without the usual hysteria that surrounds a war. If we are able to avoid hysteria and proceed on a normal businesslike basis, we will have no trouble. The railroads will be able to provide all the transportation needed for such a program. If it is necessary, railroad equipment or facilities can be expanded as fast as industry can be expanded, and both should move along together as the tempo of the program increases.

"Railroads are vitally concerned with the time element. We have records from the last war showing thousands of cars of foundation material on hand before plans for the foundation were completed; of roofing material arriving before the foundation was completed; and anchors for ships arriving before the keels were laid. In all these cases, no provision had been made for storing the material, which resulted in the forced use of railroad cars for storage purposes. This all came about because some inexperienced person had overlooked the time element and had failed to specify delivery dates when the material was ordered.

"The railroads urge that all industry and contractors having a part in the preparedness program specify delivery dates for all material ordered and provide adequate storage space so cars can be promptly unloaded on arrival.

"The preparedness program has made it necessary to expand the Car Service Division, and it now has two new agencies. The first is the Port Control organization with G. C. Randall as manager. This Section was established November 15, 1939, and is responsible for the flow of waterborne traffic through the Atlantic and Gulf ports. It will also handle the Pacific ports if business there indicates the necessity for such action.

"While this agency has embargo power, it is not being used and it appears that there will be no necessity for it. Notwithstanding the fact that at New York, business is moving at the rate of 75 to 80 per cent of the World War load, and in one month this year the exports there actually exceeded the business in the corresponding month in 1918, there is no congestion. There is a conservative backlog of cars on hand for trans-shipment at all times, and cars are arriving at ports as ships are made available for loading.

"This highly satisfactory situation is brought about by the co-operation with the port manager by all interested parties, including railroads, shippers, brokers, transshippers and boat owners. It furnishes quite a contrast with 1918 when the port was embargoed and cars were moved only on permits, some 20,000 of which were outstanding at one time. It is further significant in view of the fact that our current monthly shipments to the United Kingdom are exceeding our average monthly cargo shipments to our forces in France and to France and England during the last World War.

"The second agency established is the Military Transportation Section under Mr. A. H. Gass as manager. This Section was established on August 1, 1940, replacing the old Troop Movement Section, and is located in the office of the quartermaster general of the United States Army, at Washington, D. C. By agreement among the quartermaster general, the Association of American Railroads and the Inter-Territorial Passenger Association, the manager of the Military Transportation Section is the liaison officer between the army and the railroads on all matters pertaining to the movement of men and material in peace-time and in war. It is authorized to perform a similar service for the navy and the marine corps.

"In addition to the two new Sections of the Car Service Division, whose duties I have outlined, we have placed an added load upon the district managers in that they are responsible for any congestion that may occur in their territory. They will be expected to make prompt report of any congestion or other condition which interferes with the full and efficient use of the entire transportation plant."

Traffic Men to Meet October 22-23

The Associated Traffic Clubs of America will hold its 19th annual meeting at the Bellevue-Stratford hotel, Philadelphia, Pa., October 22 and 23. Among the speakers will be Chairman Joseph B. Eastman of the Interstate Commerce Commission, Vice-President R. C. Morse of the Pennsylvania and President John A. Stevenson of the Penn Mutual Life Insurance Company. The speaker at the dinner on October 22 will be Senator James J. Davis of Pennsylvania; H. J. Fink, president of the Traffic Club of Philadelphia, will preside, and J. M. Fitzgerald, chairman, board of directors, Associated Traffic Clubs of America and vice-chairman, Committee on Public Relations, Eastern Railroad Presidents Conference, will act as toastmaster.

Foreign Commerce Club to Honor Railroading

The Foreign Commerce Club of New York will hold its annual railroad night at the Hotel Astor, New York, on October 16. The presidents and vice-presidents of eleven roads entering New York will be guests of honor.

N. Y. Railroad Club to Meet October 17

The New York Railroad Club will hold its next regular meeting on October 17 at the Engineering Societies building, 29 West 39th street. The guest speaker will be Sir Louis Beale of the British Purchasing Commission, the title of whose talk will be "Trade Winds from Mars."

MS-1 of Illinois Central Completes Four Years Service

MS-1, fast merchandise train operated by the Illinois Central between Chicago and Memphis, Tenn., completed four years of operation on October 1. During this period the train has established on time arrival performance of 95 per cent, and has averaged 38 cars a day.

Fire Protection Men to Meet October 15-16

The Fire Protection & Insurance section of the Association of American Railroads (formerly the Railway Fire Protection Association) will hold its second annual meeting at the Congress hotel, Chicago, on October 15 and 16. Among the speakers will be Holcombe Parkes, associate director of public relations, Association of

Denies Car Service Division Has Recommended Purchase of Cars

M. J. Gormley, executive assistant of the Association of American Railroads, on October 1 denied a published report that the Car Service Division had recommended that the railroads purchase approximately 100,000 new freight cars within the next 12 months. The published report said that the survey it was reporting on had gone into prospective equipment needs in the light of possible demands, both from ordinary commercial sources and the national defense program.

It proceeded to give data on the present car supply along with figures on what it said the Car Service Division had recommended in the way of an increase in that supply during the next year. It added that in conducting the study the Car Service Division had surveyed the needs of every individual road, coming out with the aforementioned 100,000 total and then breaking it down by roads and by classes of cars.

In denying that there was any foundation for the report that such recommendations had come from the Car Service Division, Mr. Gormley stated that programs for the acquisition of cars are more or less flexible and subject to change in accordance with traffic trends. Thus he would not predict that 100,000 cars would not be purchased during the coming twelve months; he said it is not known how many will be ordered. Meanwhile the A. A. R. executive assistant pointed out that 10,000 new cars were put in service during the last quarter of 1939; while 44,000 had been installed this year up to September 1. In addition there were on order as of that date some 18,000 cars, and the A. A. R. has unofficial advices of orders for about 13,000 placed since that time.

American Railroads, and A. R. Small, president of the Underwriters' Laboratories.

The Section announces that "National Fire Protection" Week will be observed this year from October 6 to 12 and states that "the railroads will undoubtedly participate in this important event by reviewing fire protection activities with special attention to those details that are peculiar to railroad operation and needs."

Ill. C. of C. to Hold Transportation Luncheon on October 10

The Illinois Chamber of Commerce will hold its twenty-second annual transportation luncheon at the Palmer House, Chicago, on October 10. J. J. Pelley, president of the Association of American Railroads, will be the speaker and his subject "Keeping Ready."

S. P. Affiliate Seeks I. C. C. Authority

The Pacific Motor Transport Company, a motor carrier subsidiary of the Southern Pacific, has asked the Interstate Commerce Commission for authority to purchase the motor carrier operations of the Southern Pacific between Hereford, Ariz., and Ft. Huachuca, and between Bisbee, Ariz., and Bisbee Junction.

Hearing on A. A. R. Suit Set for October 21

The suit brought by the Department of Justice against the Association of American Railroads, its officers and members, charging a conspiracy to violate the Sherman Anti-Trust Act by refusing to enter into through routes and joint rates with motor carriers has been tentatively set for hearing in the United States District Court for the District of Columbia on October 21.

Practitioners Will Hold Two-Day Meeting

The Association of Interstate Commerce Commission Practitioners will hold its annual meeting at Chicago on October 10 and 11. Speakers include Chester C. Thompson, president of the Inland Waterways Corporation; Luther M. Walter, trustee of the Chicago Great Western; James M. Landis, dean of the law school of Harvard University; and Joseph B. Eastman, chairman of the Interstate Commerce Commission.

G. W. R. Chairman Dies

Lord (Robert S.) Horne, chairman of the Great Western (England) since 1934, passed away on September 3 at the age of 69. Educated for the bar, Lord Horne practiced in Scotland for many years. In 1918 he became a member of Parliament, holding his seat until 1937 when he was created first Viscount Horne of Slamannan. During the war Lord Horne served as assistant inspector-general of transportation, director of the Department of Materials and Priority, Admiralty, Director of the Admiralty Labor department and Third Civil Lord of the Admiralty. In 1919 he was appointed Minister of Labor. From 1920 to 1921 he was president of the Board of Trade and from 1921 to 1922 was Chancellor of the Exchequer. In 1923 he was elected to the board of the Great Western and in 1934 became its 15th chairman.

A. A. R. Member Road Meeting to Be Open to Public

Sessions open to the public will comprise part of the program for the annual meeting of Association of American Railroads member roads to be held in New York on November 14. The decision to try out this idea was reached at the September 27 meeting of the A. A. R. board of directors in Washington, D. C.

The program for the open sessions will include speeches by persons from outside the railroad industry. Meanwhile there will be closed sessions for the transaction of the A. A. R.'s internal business, such as action on its budget, etc.

The suggestion that the A. A. R. should try out the open-meeting idea is understood to have originated with the Association's vice-president and general counsel—Judge R. V. Fletcher. As noted in the *Railway Age* of November 4, 1939, page 715, the matter came up in informal fashion at the October 27, 1939, meeting of the A. A. R. board. There Judge Fletcher is understood to have pointed out that open-forum annual meetings are held by associations in many lines of business, such as banking, investment banking and insurance. Also, he is said to have cited in the same connection the practices of the American Short Line Railroad Association and American Trucking Associations, Inc., proceeding to ask: "Why not the A. A. R.?"

House Passes Prior Service Records Resolution

The House of Representatives on September 30 adopted the Senate-approved Senate Joint Resolution 267, thereby completing legislative action on that measure which authorizes the Railroad Retirement Board to pay railroads for the work of bringing up to date the service records of prospective applicants for annuities under the Railroad Retirement Act.

The resolution allocates $9,000,000 from the Railroad Retirement Account for the work; and payments for the prior-service records must not be in excess of 50 cents for the record of one man for one year.

Mid-West Board Meeting

The fifty-second regular meeting of the Mid-West Shippers Advisory Board will be held at Davenport, Iowa, on October 3 with transportation and national defense as the keynote of the meeting. H. W. Siddall, chairman of the Transcontinental Passenger Association and of the Inter-Territorial Military Committee, will address the meeting on the Army and the Railroads, and Col. Norman F. Ramsey, commandant of the Rock Island Arsenal, will be the speaker at a luncheon. The board's forecast of car loadings for the fourth quarter of 1940 shows an increase of 7.6 per cent, compared with the same quarter last year.

The Canadian Roads in August

The Canadian National in August had gross revenues of $21,220,188 (an increase of $4,864,732). Operating expenses were $17,552,007 (up $1,835,754). Net operating income was $3,668,181 (up $3,028,978). For the eight months, gross revenues were $157,296,771 (a rise of $37,696,127). Expenses were $133,255,922 (up $14,003,000). Net operating income was $24,040,849 (an increase of $23,693,137).

The Canadian Pacific in August had gross revenues totaling $15,512,882 (an increase of $2,857,522). Operating expenses were $13,249,285 (up $1,499,874). Operating net was $2,263,597 (a rise of $1,357,647). For the eight months, gross was $106,200,971 (a rise of $20,080,363). Expenses totaled $88,896,537 (up $9,659,382). Net operating income was $17,304,434 (an increase of $10,420,980).

University of Illinois Abandons Railway Engineering Dept.

Effective with the college year now beginning, the University of Illinois has abolished its Railway Engineering Department, and is distributing among other departments the more than 25 courses heretofore offered in railway engineering. This brings to a close a department organized in 1906, at which time it is said to have been the first distinctly railway engineering department in a university. In the 33 years in which this department has functioned 287 men have been graduated, many of whom have gone into railway service. In addition to the courses that are now distributed among other branches of the University, two new survey courses are being added to acquaint students with all forms of transportation.

Nothing Yet on Transport Study Board

Responding to a question in that connection, President Roosevelt stated at his September 27 press conference that he had done nothing as yet about appointing the three-member board of investigation called for in the Transportation Act of 1940. The act assigns the board to make a study of the relative economy and fitness of the various agencies of transportation; the extent of government aids to each; and the extent to which taxes are imposed upon carriers.

Meantime, while the act was pending before Congress the National Resources Planning Board launched a transportation study under the supervision of Owen D. Young, former chairman of the General Electric Company; and there have been some speculations to the effect that this study might be merged with the study called for by the act. Also, there have been some reports that representations have been made to the White House that the President should delay appointing the three-man board until some preliminary statement comes from the Young group.

Such a statement is expected to be forthcoming within the next couple of months.

Equipment Depreciation Orders

Equipment depreciation rates for seven railroads, including the Pittsburgh & West Virginia, have been prescribed by the Interstate Commerce Commission in a new series of sub-orders and modifications of previous sub-orders in No. 15,100, Depreciation Charges of Steam Railroad Companies. The composite percentages for all equipment, which are not prescribed rates, range from 2.56 per cent for the Rockingham to 9.17 per cent for the Smoky Mountain.

The Pittsburgh & West Virginia's composite percentage is 3.29, derived from prescribed rates as follows: Steam locomotives, 3.29 per cent; freight-train cars, 3.27 per cent; work equipment, 3.73 per cent; miscellaneous equipment, 17.75 per cent.

Los Angeles Passenger Station Now One of the Busiest

More transcontinental trains are received and dispatched at the Los Angeles Union passenger station in a certain period of time than at any major terminal in the country, according to George E. Donnatin, superintendent, in an address before the Pacific Railway Club on July 12. "Because of these and other trains," he continued, "in the average winter month we handle 65,000 pieces of checked baggage, 550,000 sacks of mail, and 80,000 to 100,000 other items carried in baggage and mail cars; during this same period of the year, the red cap porters handle 100,000 pieces of hand baggage monthly. In the average summer month the baggage handled increases 60 to 75 per cent, while the mail and milk traffic drops slightly. In December, due to Christmas mails, the volume of mail handled increases 1,000,000 sacks.

"Traffic at the station has two normal peaks, the lesser in the morning and the greater in the evening. In the morning the preponderance of movement is arriving, with 13 trains in and 5 out between 7:00 a. m. and 9:00 a. m., or one train in or out every 7 minutes. Evening traffic is mostly outbound with 6 trains in and 14 out between 7:00 p. m. and 9:00 p. m., or one train every 6 minutes. The departing trains create the greater congestion, both as to density of population of the passenger areas and with respect to baggage handling facilities as a whole.

Seaboard Doubles Size of Silver Meteors

The Seaboard Air Line, effective this winter season, will operate 14 cars regularly on its all-coach Silver Meteor between New York and both coasts of Florida in place of the seven cars operated previously. The West Coast Orange Blossom, twin of the east coast train of the same name, will be made all-sleeping car for the first time in its history, and will be Diesel-hauled, affording Florida travelers three Diesel-operated trains to both coasts of the state. During the summer months the road has been operating its Cotton States and Southern States Specials and Robert E. Lee with Diesel-electric locomotives; these trains will be again hauled by steam when the winter season begins, when use of all available Diesel-electric power is required on Florida winter-season runs.

P. R. R. to Run Excursion Service for Encamped Forces

The Pennsylvania inaugurates a special week-end excursion service today (October 5) between New York, New Jersey points and Fort Dix, N. J., for the benefit of troops on leave from the army encampment at the latter. The special will leave Fort Dix (on the line between Trenton and Camden) at 1 p. m. and operate to New York with stops at Trenton, New Brunswick and Newark. Returning the train will leave Pennsylvania station at 7:40 p. m. Sunday evening, reaching the encampment shortly before the call of taps.

For the benefit of relatives and friends of soldiers stationed at Fort Dix, a special train will leave Pennsylvania station at 9:05 a. m. Sunday morning and operate with stops at the same cities en route to the encampment. Returning it will leave Fort Dix at 5:30 p. m. Sunday evening. Round trip fares to Fort Dix on special runs will be $1.75 from New York; $1.60 from Newark; $1.50 from Elizabeth; $1.10 from New Brunswick; and 60 cents from Trenton.

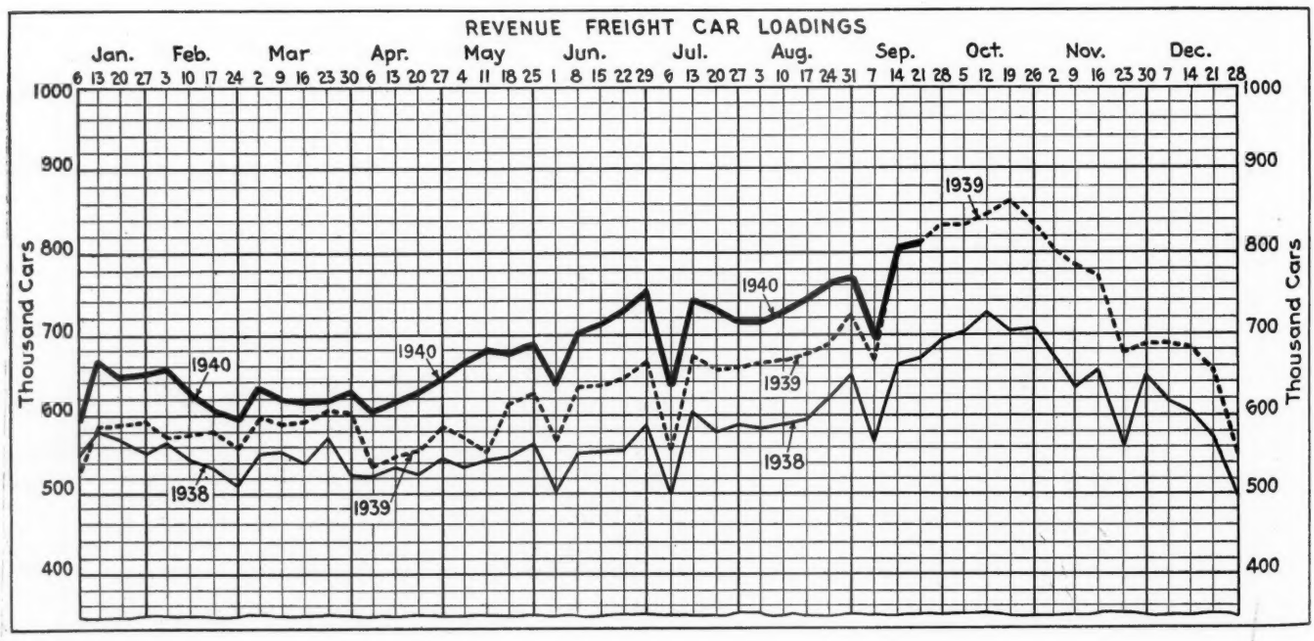
Ill. C. C. Order for Drinking Cups on E. J. & E. Set Aside

An order entered by the Illinois Commerce Commission on October 17, 1939, directing the Elgin, Joliet & Eastern to furnish ice, water and drinking cups in cabooses on trains operating in Illnois was set aside by the Circuit court of Cook County on September 23. The commission's order was issued on June 20, 1938, following a complaint filed by the Brotherhood of Railroad Trainmen. The appeal to the circuit court was made on November 16, 1939. On January 25, 1940, this court ruled that certain portions were arbitrary and void and others valid. The supreme court of Illinois to which the railroad appealed handed down its opinion on June 13, 1940, reversing the order of the circuit court and remanding the cause to it.

The opinion of the supreme court did not pass upon the merits of the order of the commission but merely directed the circuit court to enter an order either affirming or setting aside the order of the commission on the grounds that the circuit court is without power to affirm in part and set aside in part the order of the commission.

Freight Car Loading

Loading of revenue freight for the week ended September 28 totaled 882,434 cars, the Association of American Railroads announced on October 3. This was an increase of 9,105 cars, or 1.1 per cent, above the preceding week, a decrease of 7,262 cars, or 0.9 per cent, below the corresponding week last year and an increase of



125,526 cars, or 18 per cent, above the comparable 1938 week.

As reported in last week's issue, loading of revenue freight for the week ended September 21 totaled 813,329 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For Week Ended Saturday, September 21

Districts	1940	1939	1938
Eastern	165,837	170,172	124,791
Allegheny	170,383	162,723	117,747
Pocahontas	54,538	55,557	49,451
Southern	111,359	113,564	106,345
Northwestern	137,023	125,267	99,633
Central Western	118,506	122,598	114,120
Southwestern	55,683	59,871	57,617
Total western Districts	311,212	307,736	271,370
Total All Roads.	813,329	809,752	669,704
Commodities			
Grain and grain products	40,943	46,791	39,577
Live stock	18,592	19,551	16,509
Coal	144,483	154,046	130,275
Coke	11,102	9,399	6,182
Forest products.	41,022	35,755	31,903
Ore	68,397	58,269	27,079
Merchandise l.c.l.	157,201	162,098	153,638
Miscellaneous	331,589	323,843	264,541
September 21	813,329	809,752	669,704
September 14	804,309	800,431	660,163
September 7	695,258	662,357	568,707
August 31	768,821	716,397	648,029
August 24	761,002	683,906	620,557
Cumulative Total, 38 Weeks	25,763,393	23,456,248	21,442,247

In Canada.—Carloadings for the week ended September 21 totaled 63,422, as compared with 61,779 cars in the previous week and 72,157 in the corresponding week in 1939, according to the Dominion Bureau of Statistics' weekly statement.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Sept. 21, 1940	63,422	26,359
Sept. 14, 1940	61,779	26,143
Sept. 7, 1940	55,361	21,533
Sept. 23, 1939	72,157	26,919
Cumulative Totals for Canada:		
Sept. 21, 1940	1,984,003	925,671
Sept. 23, 1939	1,762,096	775,979
Sept. 24, 1938	1,725,693	759,605

August Locomotive Shipments

August shipments of railroad locomotives totaled 55 as compared with 30 in July and 34 in August, 1939, according to reports received by the Department of Commerce's Bureau of the Census from the country's builders. Unfilled orders at the end of August totaled 277 locomotives as compared with 232 on July 31, and 122 at the end of August, 1939.

The 55 locomotives shipped in August included eight steam, 44 Diesel-electrics and two of other types for domestic service and one steam for export. During this year's first eight months a total of 328 locomotives were shipped, including 41 steam, 242 Diesel-electrics and 12 of other types for domestic service, and 33 steam for export; in the comparable period last year shipments totaled 196 locomotives, including 22 steam, 154 Diesel-electrics and nine of other types for domestic service, and eight steam and three Diesel-electrics for export.

Data supplied by the Car Service Division, Association of American Railroads, on locomotive building in railroad shops show that six locomotives, including four steam and two electrics, were thus built in August, as compared with three, all steam, in August, 1939. During this year's first eight months 53 locomotives (33 steam and 20 electrics) were built in railroad shops, as compared with 33 (16 steam and 17 electrics) built during the first two-thirds of 1939. As of September 1, there were on order in railroad shops 20 locomotives, including six steam and 14 "gas or Diesel."

Williamson Receives Goodrich Award; Hails R. R. Readiness

Declaring that the American railroads are better prepared to meet the defense needs of the country than any other single unit of the national economy, President Frederick E. Williamson of the New York Central pictured defense traffic needs at the Goodrich Arena at the New York World's Fair on October 1, after receiving the B. F. Goodrich Company's award for distinguished public service. In presenting the award, David M. Goodrich, chairman of the rubber company's board, told Mr. Williamson that it was made "in recognition of your service to our country in the important field of transportation; of your helpful association with the United States Railroad Administration during the World War; of your executive interest in the Association of American Railroads, and of your leadership in the transportation industry."

The New York Central president estimated that the carriers would be called on to provide 25,000 cars per week for preparedness purposes, which would mean a rail movement of approximately 4 per cent of the average weekly loadings in 1939.

New Chicago-Phoenix Train to be Inaugurated by R. I. and S. P.

A new high-speed, streamlined all-Pullman train will be operated between Chicago and Phoenix, Ariz., by the Chicago, Rock Island & Pacific and the Southern Pacific from December 15, 1940, to April 1, 1941, on a schedule of 39⅔ hr. westbound and 38½ hr. eastbound for the 1,916 miles. Each unit will consist of a baggage car with dormitory accommodations for the dining car crew, a deluxe diner, two five-double bedroom-10-roomette cars and two two-drawing room-four-double bedroom-four compartment cars, and a buffet-lounge-observation car with a drawing room, two double bedrooms and two compartments. The Rock Island will haul the train with a 2,000 hp. Diesel-electric locomotive between Chicago and Tucumcari, N. M., and the S. P. will use a steam locomotive between the latter point and Phoenix. The train will leave Chicago at 8:45 p. m. every other day and arrive at Phoenix at 11:25 a. m. the third day. Returning it will leave Phoenix every other day at 6 p. m. and arrive in Chicago at 9:30 a. m.

Club Meetings

The New England Railroad Club will hold its next meeting on October 8 at the Hotel Touraine, Boston, Mass. C. E. Smith, vice-president of the New York, New Haven & Hartford, will present a paper entitled "The Old Colony Railroad." Dinner will be served at 6:30 p. m.

The Car Department Association of St. Louis will hold its next meeting on October 15 at 8 p. m. at the Hotel De Soto, St. Louis, Mo. E. W. Daniels, president, Harbor Plywood Corporation, will present a paper entitled "Plywoods and Their Various Uses," accompanied by a colored sound motion picture. Dinner and a social period will precede the meeting at 6 p. m.

The Metropolitan Traffic Association of New York will hold its next meeting at the Imperial hotel, New York, on October 10, at which time it will hold its annual election of officers.

The Traffic Club of Newark, N. J., will hold its next meeting at the Robert Treat hotel on October 7 when it will hold its annual election of officers. The next meeting of the traffic club forum will be held at the same place on October 14. Public, customer and employee relations will be discussed.

Retirement Board Operations

Benefit payments under the Railroad Retirement Act in July amounted to $9,818,565, bringing total payments since the beginning of the retirement system to $318,144,423, according to the latest issue of the Railroad Retirement Board's "Monthly Review."

Employee annuities in force at the end of July numbered 107,297 with a total monthly amount payable of $7,034,920. The number in force increased 1,219 over June as compared with an average monthly increase of 1,324 during the fiscal year 1939-40. The monthly amount payable increased $81,000 over June as compared with an average increase of $88,000 a month during 1939-40.

Former carrier pensioners on the rolls of the Board at the end of July totaled 34,809 and the monthly amount payable to them was $2,042,846. Lump-sum payments on employee annuities were made in 221 cases, less than 0.2 per cent of all employee annuities certified from the beginning of operations to the end of July. These are annuities under the 1937 act which amounted to less than $2.50 a month, or annuities under the 1935 act whose commuted value was less than $300. In most of these cases the annuitants had no prior service credit.

Unemployment insurance claims received in the five weeks ending August 2 averaged 22,950 a week as compared with an average of 20,907 in June. This increase is attributable largely to the fact that many employees who could not file effective claims in June could do so in July.

Benefit payments totaling $794,000 were certified on 55,155 claims in July. Of these certifications, it is estimated that 45,709 were based on 1938 wages and 9,446 on 1939 wages. The average certification was $14.40, about 4 per cent above the average certification in June.

Fan Activities

The Baltimore & Ohio will operate a two-day railroad inspection trip from New York to Cumberland, Md., and return on October 19 and 20, covering 775 miles. At Cumberland the party will inspect the motive power of the Baltimore & Ohio and the Western Maryland, and will travel by

bus to the Mount Savage shops of the 97-mi. Cumberland & Pennsylvania.

James Partington, manager of the engineering department of the American Locomotive Company, will give an illustrated talk entitled "Steam Locomotives, 1890-1940" at the next meeting of the Railroadians of America to be held on October 11 in the auditorium of the Pennsylvania Railroad Y. M. C. A. at Pennsylvania station, New York. It is to be noted that this organization will hold its monthly meetings hereafter at the Y. M. C. A. in place of its present headquarters in the Times Square building.

An "Information Please" program in which guests and members will be asked to seek to stump a board of experts which, it is hoped, will include several railroad officers, constitutes the chief item at the next meeting of the New York division of the Railroad Enthusiasts at Grand Central terminal, New York, on October 25.

The Delaware, Lackawanna & Western will operate a photographers' and railroad hobbyists' trip out of New York on October 20. The special train, which will be equipped with air-conditioned coaches, dining car, tavern-recreation car and a low-side gondola for "fresh-air fiends," will follow the Lackawanna's Boonton, main and Sussex lines to Andover junction, whence it will run over the Lehigh & Hudson River to Maybrook, N. Y. After an inspection of the yard there the party will proceed over the Erie, Lehigh & New England and New York, Susquehanna & Western to Portland, Pa., where it will again connect with the Delaware, Lackawanna & Western and return to New York via the main line.

Grade Separation at Winnetka, Ill., Nears Completion

The $3,450,000 grade separation project undertaken by the Public Works Administration, the village of Winnetka, Ill., the Chicago & North Western and the Chicago, North Shore & Milwaukee in Winnetka came a step nearer completion on September 26 when the double-track operations of the North Shore electric were moved to their permanent location. The project, which was started in December, 1938, involves the elevation of the grade for the two tracks of the North Shore and the two tracks of the North Western for a distance of 4,390 ft., and a lowering of the grade of the tracks of both roads for a distance of 14,530 ft. The first step was to construct temporary main tracks for the North Western to the west of its line. The second, completed in 1939, was the elevation and depression of its right-of-way and the construction of its permanent tracks. Since that date, the North Shore has used the North Western's new right-of-way while its tracks have been elevated and depressed. With the return of the North Shore to its completed tracks, the North Western's line will be finished, its operations transferred from the temporary to the permanent line, and its temporary tracks removed.

Congress Approves Unemployment Insurance Act Amendments

Under a suspension of the rules the House of Representatives on September 30 passed S. 3920, the bill approved by the Senate, which would increase benefit payments under the Railroad Unemployment Insurance Act and make some procedural changes in the law desired by the Railroad Retirement Board. As pointed out in the *Railway Age* of September 21, page 417, it was estimated that the bill passed by the Senate would increase benefit payments by 115 per cent, while the House version would decrease that figure by 22.4 per cent, thus resulting in an upping of the benefit payments by 92.6 per cent. On October 2 the Senate, without debate, concurred in the House amendments, thereby completing Congressional action on the bill which now goes to the President.

Before reporting the bill to the House the interstate and foreign commerce committee struck out section 27 of the bill which authorized the Railroad Retirement Board to grant to employees receiving not more than $3,300 a year, as compensation for overtime work, one day of leave for every four hours of overtime work but not more than 26 days in a year. It was explained that the Civil Service Commission took the position that the provision was not in accord with the recommendations of the Bureau of the Budget, and if enacted into law, would cause trouble because of the fact that it could not be applied generally to government workers without great expense and disturbance of government work.

Before reporting the bill the House committee also agreed to eliminate a provision which would have established a permanent administrative revolving fund for the Railroad Retirement Board with respect to the Railroad Retirement Act. A similar fund exists for the operation of the Unemployment Insurance Act.

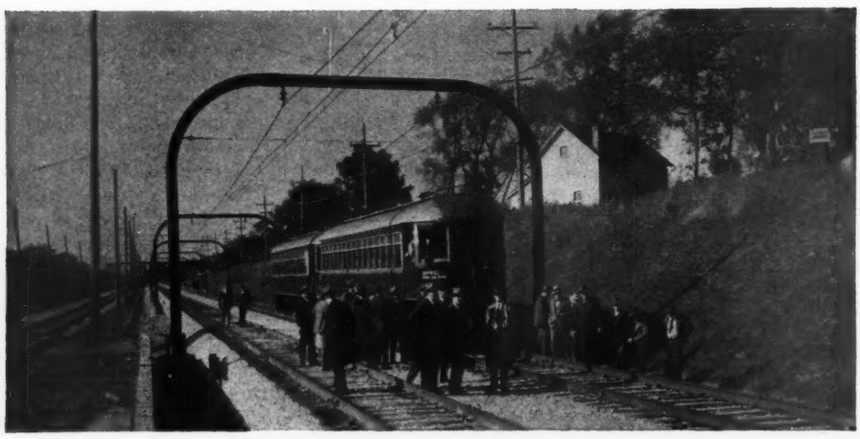
During the short debate in the House there was no opposition expressed to the bill. Representative Crosser, Democrat of Ohio, called the measure up and Representative Wolverton, Republican of New Jersey, made an explanatory statement urging its adoption. Among those speaking in support of the measure were Representatives Van Zandt, Republican of Pennsylvania; Angell, Republican of Oregon; and Fish, Republican of New York. Chairman Lea of the interstate and foreign commerce committee, told the House that Representative Cole, Democrat of Maryland, would have voted in favor of the bill had he been able to be present.

House Passes "Stop-Gap" Bill for Forwarder Regulation

Under a suspension of the rules the House of Representatives on September 30 passed H. R. 10398, the "stop-gap" forwarder-regulation bill to apply various sections of the Motor Carrier Act to forwarders and thereby authorize their filing with the Interstate Commerce Commission of those tariffs naming joint rates with motor carriers which the commission has ordered stricken from its files. The effective data of the commission's orders in the latter connection has been postponed from time to time, and is now set for October 31.

As passed by the House the bill contains a provision which is understood to be objectionable to the Freight Consolidators & Forwarders Institute, which has been sponsoring "stop-gap" legislation. The provision stipulates that any common carrier subject to the Interstate Commerce Act, "without making application for or obtaining a certificate," may engage in forwarder operations. It is the position of the Institute that this provision goes beyond the "stop-gap" legislation which they are seeking in order to preserve the status quo of the joint truck-forwarder arrangements until Congress disposes of proposals for more comprehensive regulation of forwarders. Representative South, Democrat of Texas, who explained the bill on the floor of the House pointed out that it has an expiration date of August 1, 1941, "regardless of whether permanent and well-considered legislation may have been enacted." Mr. South went on to assert that failure to continue the joint arrangements would mean that "about 50 per cent of the work now being done by the forwarders would be stopped and the loss would be largely on off-line points . . . and small shippers would suffer. . ."

Meanwhile the sub-committee of the Senate committee on interstate commerce has taken no action on similar "stop-gap" bills which it has under consideration, and present indications are that such inaction may continue. However, it is understood



Inspection Party Watches First North Shore Train Operate Over Completed Tracks. North Western's Permanent Tracks Are Shown at the Left

to be the hope of the forwarders that the House's action will be construed as an indication of Congress' continuing interest in the matter; and thus the I. C. C. may be disposed to grant further postponements until such time as Congress acts one way or the other on forwarder regulation.

August Truck Freight 11 Per Cent Ahead of 1939

The volume of revenue freight transported by motor truck during August represented an increase of 4.6 per cent above July, and an increase of 11.1 per cent above August, 1939, according to tonnage reports compiled by the American Trucking Associations.

Comparable reports were received from 223 motor carriers in 38 states; the reporting carriers transported an aggregate of 1,373,013 tons in August, as against 1,312,067 tons in July, and 1,236,150 tons in August of last year. The A. T. A. index figure, computed on the basis of the 1936 monthly average tonnage of the reporting carriers as 100, stood at 139.82 for August; in July, the index was 133.75, and in August, 1939, it was 126.02.

Approximately 73 per cent of all the freight transported during the month was reported by carriers of "general merchandise." The volume of general merchandise carried increased 8.3 per cent over July, and 9.8 per cent over August, 1939. Transporters of petroleum products, accounting for slightly more than 16 per cent of the total tonnage reported, showed a decrease of 0.2 per cent in August, as compared with July, but their volume represented an increase of 16.8 per cent over August of last year. Movement of new automobiles and trucks, constituting 1.4 per cent of the total tonnage, decreased 53.7 per cent under July and 49.5 per cent under movements of August, 1939. The decrease in this class was attributed to factory shutdowns due to change over to 1941 models. Iron and steel products represented 3.8 per cent of the total reported tonnage. The volume of these commodities increased 12.5 per cent over July, and 30.7 per cent over August, 1939. Five per cent of the total tonnage reported was miscellaneous commodities, including tobacco, textile products, bottles, building materials, coal, cement and household goods. Tonnage in this class increased 1.2 per cent over July, and 45.1 per cent over August of last year.

Safety Rules for Private Carriers

The Interstate Commerce Commission, Division 5, has issued a supplemental report in Ex Parte MC-3, modifying in certain respects the safety regulations therein prescribed for private motor carriers operating in interstate commerce. As noted in the *Railway Age* of September 28, page 449, these safety regulations are now scheduled to become effective on October 15.

The modifications make it clear that the commission did not intend to apply certain of the regulations to private vehicles and drivers thereof while such vehicles are used wholly within a municipality or between contiguous municipalities or within a zone adjacent to and commercially a part of such municipality or municipalities. Another amendment specifically relieves drivers of vehicles operated within municipal zones from the requirement calling for maintenance of a driver's log; while a third relieves drivers of all work trucks from the log-keeping rule. In the latter connection the commission said that it had little evidence except as to trucks operated by public utilities. Thus "we shall watch the situation and if we find that private carriers are using this exemption to avoid the maintenance of drivers' logs on operations for which such an exemption is not appropriate, and particularly where the work trucks are operated for long distances between stops, we shall give consideration to limiting this exemption.

Chairman Eastman was a member of the Division 5 which prepared the report. Other members were Commissioners Lee, Rogers and Alldredge. Mr. Alldredge wrote a brief concurring expression, noting his agreement that the modifications should be made but adhering to the views expressed in his dissent to the original report. The latter was reviewed in the *Railway Age* of May 11, page 834, where it was pointed out how Mr. Alldredge expressed the view that the commission should for the present concentrate on the promotion of safe operations by common and contract carriers and take care of the private carriers at a later date.

Demands on Steel Will Not Exceed Capacity to Produce

"I can see no reason, at the moment, for assuming that war and rearmament demands upon the steel industry will be greatly in excess of our capacity to produce during the next year or two," said Edward L. Ryerson, chairman of the board of the Inland Steel Company in an address before the Association of Iron and Steel Engineers at its annual meeting at Chicago on September 26. "It must be emphasized that in the last analysis war business in steel is only a relatively small percentage of the production that is in use or may be in use, even under increased activity of any rearmament program. I have made an attempt to obtain some figures indicating what may be expected of us in the steel industry to meet the requirements of the rearmament program now being pursued by our Army and Navy with the aid of those billions of dollars that are being appropriated for this purpose. I find that the requirements of the defense program will not be likely to exceed six to seven million tons in the peak year of its development, and that, so far as we can estimate at the moment, the year 1942 may get on a production basis that will call for five million tons of finished steel. When we relate this to our estimated annual capacity of approximately 57 million tons of finished steel products, or to our 1939 production of approximately 39 million tons, it gives us comfort to know that the requirements estimated for 1942 will only amount to about 12.8 per cent or less of what we produced in 1939.

Of course, added to this we must take into consideration the requirements of those countries that are looking to us for help in the production of war materials. Fortunately we are able to send large tonnages of steel to them which, at the present time, is running at the rate of approximately 6 million tons per year. If we add that, as long as it must continue, to our own requirements, we find that the two combined will mean that approximately 19.3 per cent of our total capacity may be applied to this unfortunate business in materials of war. No one can obtain comfort in the knowledge that any such amount of a highly developed and useful product is being made for the purpose of destruction, but we can obtain some satisfaction in the knowledge that the vast majority of steel products are still going into peaceful and useful services."

Tax Bill Passed

The conference report on H. R. 10413, the so-called excess profits tax bill, was adopted by both the House and Senate on October 1, and the bill was sent to the President for approval. As passed by the Congress, the bill provides, among other things:

An increase of 3.1 per cent in the normal income tax rate on corporations having normal tax net income of more than $25,000. The total income tax rate, including the 10 per cent defense tax increase, thus becomes 24 per cent. The normal tax on corporations having net income of $25,000 or less is not increased. Corporations having an adjusted excess profits net income in excess of a specific exemption of $5,000 are subject to an excess profits tax at rates ranging from 25 per cent on the first $20,000 to 50 per cent on all over $500,000 of such income. An excess profits credit is allowed which may be based either upon average earnings during the four year (1936-1939) base period or upon invested capital. If the average earnings method is used, the credit is limited to 95 per cent of the average base period net income with adjustments to reflect changes in capital. If the invested capital method is used, the credit is a flat 8 per cent of the average amount for the year. Invested capital is defined as the sum of the amount paid in for stock plus earnings and profits at the beginning of the year plus 50 per cent of borrowed capital, adjusted to reflect distributions, substituted bases for property, mergers, changes during the year, etc. Excess profits net income is defined as the normal tax net income after certain deductions, among which are income taxes, long term gains and losses, income from discharge of debt, etc.

The Commissioner of Internal Revenue is authorized to adjust abnormalities in income and capital, his decision being subject to review by the Board of Tax Appeals. Consolidated returns may be filed by affiliated groups of corporations under regulations to be prescribed by the Commissioner. An affiliated group is a chain of corporations connected through stock ownership in which 95 per cent of the voting stock of all but the parent is owned within the group. The adjusted basis of a certified emergency facility may, upon election by the taxpayer, be amortized over a period of 60 months. The term "emergency facility" has been expanded to include any "facility" which meets the re-

quired conditions as well as "land, buildings, machinery or equipment" and the date after which installation must have been completed has been changed to June 10, 1940.

A "National Service Life Insurance" system is established for persons in the active service of the land or naval forces of the United States. This system is patterned along the lines of the War Risk Insurance inaugurated during the World War. The Railroad Retirement Acts are amended to allow credit for periods of military service prior to January 1, 1937, when a Federal Conscription Act was in effect and during war periods and when required to serve in the armed forces of the United States. The profit limitations of the Vinson-trammell Act and the Merchant Marine Act of 1936 are suspended.

Provision is made for crediting against the federal unemployment tax for the years 1936, 1937, 1938 and 1939 the amount of contributions paid into an approved State unemployment fund with respect to employment in those years. However, only 90 per cent of the normal credit is allowed with respect to the year 1939. The Connally amendment providing for a War Profits Tax was eliminated in conference.

Seeks Shipper Aid in Car Situation

(*Continued from page* 484)

thorized by serving road; match loading and unloading performance to the extent possible with the scheduled switching service; promptly notify railroad agent of cars unloaded and ready to be moved out; load cars to capacity where orders or unloading facilities permit; consignees order full capacity loading; load and unload promptly, instead of taking advantage of the full 48 hrs. free time; completely unload cars, removing all dunnage and debris, thus making cars immediately available for next shipper; prevent damage to high-class cars, and consequent lost car days, by avoiding loading with contaminating commodities; avoid inflation in car orders.

In the aforementioned circular issued to all railroads, Mr. Kendall called attention to the Shippers Advisory Boards' estimate of an increase of seven per cent in car loadings for the fourth quarter of 1940, as compared with the corresponding quarter last year. He added: "Whether or not these expectations are realized (and the Board forecasts have proven remarkably accurate as to loading trends in the past), railroads may expect a considerable strain upon car supply during the coming Fall months, and despite the net increase of 77,235 serviceable cars as of September 1, 1940, compared with September 1, 1939."

Then, after calling attention to the shipper letter, the Car Service Division chairman made some specific suggestions as to how the railroads might proceed to "brush out the corners." He called for "diligent action" to the end that: Car Service Rules be observed; week-end campaigns be conducted to clear roads of all foreign empties which cannot be immediately used in accordance with Car Service Rules; industrial tracks be kept cleared of all empties except those which can be currently loaded; delivery of empty cars to short lines for return loading be limited to the number of cars which can be loaded promptly; all available serviceable cars be pressed into service by fitting class of car to loading required; commodity inspection of cars be established in accordance with A. A. R. recommended practice; good order cars shall not be used for storage of company material; undue accumulation for industries be avoided by the use of embargo and permit; all special per diem arrangements other than those approved under Rule 6, Appendix B, be reviewed to the end that any waste in car days resulting therefrom may be eliminated through cancellation of such arrangements; reports and supervision as to car handling, dropped during depression years, be reinstated to the extent necessary to accomplish the above objectives.

"The cooperation of roads in all of the above," Mr. Kendall says in closing, "will be most helpful in meeting the immediate transportation needs."

I. C. C. Sets Up Water Bureau; But It's Different from Motor Bureau

Although it has established a Bureau of Water Carriers in connection with its staff organization for the administration of the water-carrier regulatory provisions of the Transportation Act of 1940, the Interstate Commerce Commission has emphasized how that new bureau will be no counterpart of the Bureau of Motor Carriers as originally established after enactment of the Motor Carrier Act in 1935. The Bureau of Water Carriers, said I. C. C. Secretary W. P. Bartel in a September 27 notice announcing the new set-up, "will not be comparable with the Bureau of Motor Carriers in the range and volume of its activities."

Reporting for the present to Division 1 of the commission, the new bureau will be given charge of the administrative work in connection with the granting of water-carrier certificates and permits, the determination of what carriers are covered by exemption provisions, and "certain other miscellaneous matters." After following through from the foregoing general statement to a more specific listing of the duties delegated to the new bureau, Mr. Bartel said: "The Bureau of Water Carriers will, however, also serve an important purpose going beyond these specific duties. It is planned to have the Bureau headed by a Director and Assistants who will be men of extensive and broad practical experience in the conduct of water carrier affairs, and to utilize these men, not only for the specific administrative duties assigned to the Bureau, but also for general advice to the Commission and its staff in regard to matters as to which an intimate knowledge of water carriers and their operations and of their methods of doing business generally will be helpful. It is further planned to select these men so that they will cover in their range of experience not only the ocean carriers but those which operate on inland waterways."

Previously Secretary Bartel had led up to his aforementioned description of the new Bureau of Water Carriers as not comparable with the Bureau of Motor Carriers. There he said:

"The Transportation Act of 1940, which was approved on September 18, 1940, has added to the Interstate Commerce Act a new Part III, which gives the Commission more extensive jurisdiction over water carriers than it has heretofore had. The Commission has given careful consideration to the organization of its staff for the administration of this new Part III. When Part II, providing for the regulation of motor carriers, became effective in 1935, the Commission, instead of apportioning the new administrative work among its existing bureaus, created a Bureau of Motor Carriers made up of Sections which corresponded, to a considerable extent, to the existing Bureaus which were engaged in the administrative work under Part I and under other Acts supplementary to the Interstate Commerce Act. To this Bureau of Motor Carriers, made up in this way, the administrative work with respect to motor carriers was very largely assigned.

"The creation of such a Bureau of Motor Carriers was deemed desirable, principally because it was evident that, owing to the many thousands of motor carriers, the regulatory work in connection with these carriers would be of very great volume, and it was also evident that it would present many new problems not encountered in railroad regulation and of great complexity and would require, in many respects, new methods of administration.

"In the administration of the new Part III, however, the Commission has concluded that a Bureau of Water Carriers corresponding to the Bureau of Motor Carriers will not be needed. The ground to be covered under Part III is less extensive than under Part II, the number of carriers to be regulated is far smaller, and the carriers are also better organized and, in general, more accustomed to regulation. Moreover, the Commission has from the beginning had a limited jurisdiction over water carriers, and its existing Bureaus have had some considerable experience with them. The Commission has, therefore, decided that the administrative work under Part III can and should very largely be handled through the existing Bureaus and by appropriate expansion of their activities. Water Carrier Sections of these Bureaus may, in some instances, prove to be desirable. The necessary expansion will be accomplished to some extent through the transfer from the United States Maritime Commission of employees who have been engaged in the regulation of water carriers, and so far as it is necessary to recruit new employees, experience with water carriers will be emphasized where the work will benefit from such experience."

When the commission was reorganized on July 1, 1939, the Motor Carrier Division, i. e., the group of commissioners to which the Bureau of Motor Carriers reports, was stripped of its authority over several matters, including motor carrier rates, which matters were "functionalized" under other divisions dealing with all carriers subject to the Act. Meanwhile the Transportation Act of 1940's provisions authorizing the commission to assign its

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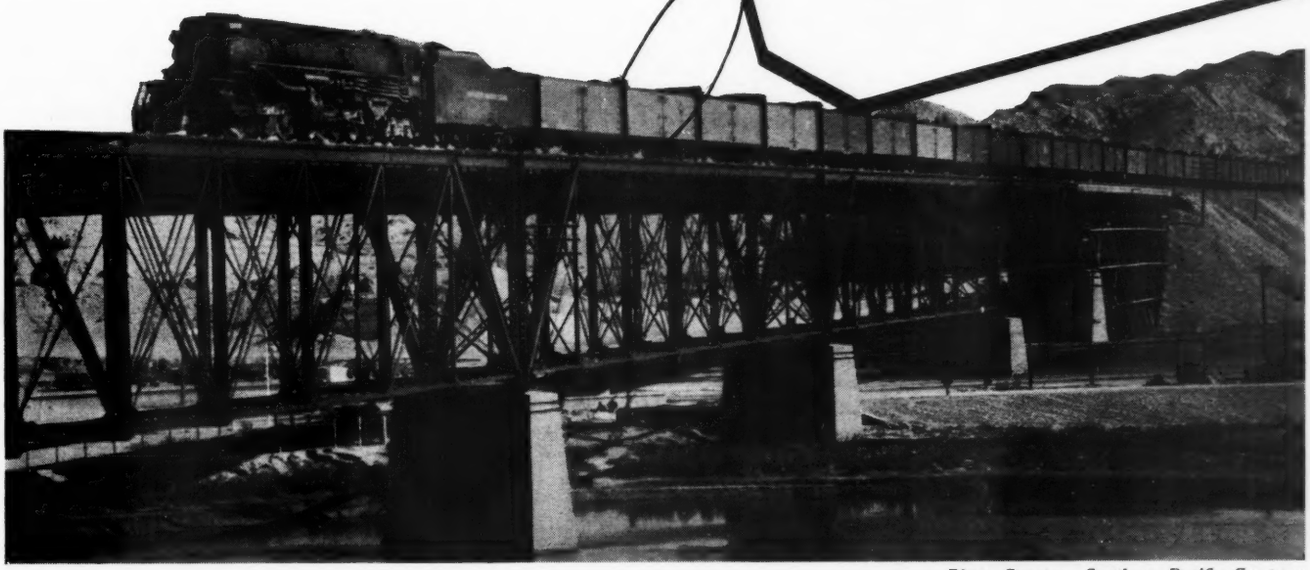

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LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

work to divisions and boards of employees stipulates that assignments of matters relating to rates, fares or charges must not be made according to the class of carriers or mode of transportation involved.

Thurman Arnold vs. the Oil Cos.

(*Continued from page* 484)

or other facilities for the transportation and distribution of petroleum."

Besides charging the companies with price-fixing in violation of the Sherman Act, the complaint goes on to specifically allege that the defendants who control pipeline gathering systems leading from producing wells to their own crude oil trunk pipelines, have "conspired" to compel those independent producers who have no other practical means of transportation to competitive markets, to sell crude oil to the defendants at the well rather than permitting the independents to use such lines on a common carrier basis. Thereby, says the Department's statement, the defendants gain control at the well of the crude oil produced by such independent producers.

The complaint further sets out that the defendant companies have agreed to adopt and file with the Interstate Commerce Commission tariffs, rules, and regulations covering the interstate transportation of crude oil, gasoline, and petroleum products which require shippers to tender "unreasonably large quantities (commonly called 'minimum tenders'), to maintain uniform non-competitive, onerous, and oppressive rates, and to fail to provide shippers with the ordinary common carrier terminal facilities."

"These tariff requirements are put into effect," says the Department of Justice, "for the purpose of reserving such pipelines as private carriers for the defendants who are themselves large shippers. The result is that independent producers and refiners are precluded from using the crude oil trunk pipelines on a common carrier basis, and from locating their refineries at advantageous points along such pipelines or at their terminals in large consuming areas; and also to preclude independent refiners and distributors from using gasoline pipelines on a common carrier basis."

Finally, it is charged that the defendants jointly and individually have acquired a dominant control over tankers, barges, tank cars, and other transportation facilities, and "have conspired to maintain excessive rates for the use of such facilities, thereby preventing their use by independent competitors."

The complaint prays for an injunction against the continuance of these practices and other practices set out in the bill filed with the court.

In a statement outlining the background of the case the Department explains that the defendant companies own or control at the present time some 60 per cent of the investment in the industry, 68 per cent of the crude oil reserves, 50 per cent of the production of crude oil, 92 per cent of the stocks of crude oil, 79 per cent of the crude oil storage capacity, 90 per cent of the imports of crude oil, 85 per cent of crude oil trunk pipeline mileage, 96 per cent of the crude oil transported in trunk pipelines, 76 per cent of the crude oil refining capacity, 87 per cent of the cracking capacity, 85 per cent of the gasoline production, 95 per cent of the exports of gasoline, 96 per cent of gasoline pipeline mileage, 87 per cent of the dead weight tonnage of oil tankers, 88 to 93 per cent of the stocks of the principal petroleum products, and 75 per cent of all the bulk plants and service stations.

Commenting on the reasons for instituting the suit, the statement says that in the past 10 years the Department has been "flooded" with complaints from independents and consumers against various practices in the oil industry. "These complaints," it goes on to explain, "have resulted in a series of piecemeal prosecutions in all of which the government has been successful. Yet, in spite of the success of these prosecutions, the complaints continue, prices are still inflexible, independent enterprise is still under a handicap, because the cases applied only to segments rather than to the entire structure of the industry."

The principal suit against the 22 companies will be supplemented by three suits; one against the Phillips Petroleum Company and the Phillips Pipe Line Company in the District Court of the United States for the District of Delaware; one against the Great Lakes Pipe Line Company in the same district; and one against the Standard Oil Company of Indiana in the Northern District of Indiana, Hammond Division. These suits, it is explained, were selected as representative proceedings to clarify the law with respect to all cases where pipelines are owned by the major oil companies. They charge the major oil companies involved with taking rebates from common carrier pipelines on the oil which the majors ship in violation of the Elkins Act.

The method by which these rebates are alleged to be taken is as follows: "The major oil companies own the capital stock of the pipeline companies, pay the published tariff rates and receive refunds from such rates under the guise of dividends on the stock. During the year 1939, the net earnings of the Phillips Pipe Line Company amounted to 49 per cent of transportation revenues; the Great Lakes Pipe Line Company 49.5 per cent; and the Stanolind Pipe Line Company 36 per cent. These earnings are paid back in the form of dividends to the major oil companies which ship the oil, thus giving the major oil company shippers a tremendous advantage over their independent competitors."

Truckers Ask Larger Share of Defense Traffic

In an effort to obtain a larger share of the transportation business resulting from the government's rearmament program, the motor carrier industry through the American Trucking Associations, Inc., has lodged with the War Department and the National Defense Advisory Commission protests that the truckers are being deprived not only of defense traffic but also are losing normal truck freight to the railroads because of "discriminatory" War Department rules in favor of the railroads.

The protests took the form of a letter to each member of the defense commission and Assistant Secretary of War Robert P. Patterson from John V. Lawrence, general manager of the A. T. A., in which the latter asked that the government transportation policy be revised in line with the Transportation Act of 1940 to permit the routing of government freight by motor vehicle.

In his letter Mr. Lawrence asserted that as a result of instructions from the defense

* * *

Pictures Inc.

Presidential Nominee Wendell Willkie Said Hello to a Large Number of Railroad Employees at South Tacoma, Wash., During his Recent Campaign Tour in the Pacific Northwest

Continued on next left-hand page

"Engineered for Easy riding"

The Type E-2 Radial Buffer makes a safer, easier riding locomotive. » » » Its spherical and cylindrical faces permit movement in any direction, while its predetermined frictional resistance dampens oscillation between engine and tender, prevents lost motion and subsequent destructive shocks to drawbar and pins. » » » Its twin, the Franklin Automatic Compensator and Snubber, takes the job of maintaining proper driving box adjustment that further improves smoothness of operation and extends locomotive mileage and reduces maintenance costs. It is particularly essential on roller bearing boxes.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO MONTREAL

commission, materials purchased by the War Department are being contracted for f.o.b. the plant of the manufacturer, with the War Department routing instructions usually specifying rail delivery. This policy is followed, he contended, largely as an interpretation of government traffic regulations requiring the ascertainment of bids when shipping by motor truck.

Mr. Lawrence then called attention to a provision in the new transportation act which eliminates the requirement that bids be obtained from motor carriers on government freight.

The A. T. A. general manager also pointed out in his letter that his group had received numerous complaints from truck operators throughout the country regarding changes in normal transportation routings. He cited as a "typical case" an instance where "extreme difficulty" was experienced in securing any form of permission to use motor truck service necessary to make an overnight delivery to New York, where cutters and other workmen were waiting for a shipment of cloth for army uniforms.

"Some of the motor carriers who have written to us," wrote Mr. Lawrence, "state that the manufacturers themselves have been perturbed over this condition as interfering with their normal, modern methods of production."

The executive committee of the A. T. A. at a meeting in Washington last week, it was learned, was advised that government transportation policy had created "bottlenecks" in transportation which were hampering the national defense program.

Recently "Transport Topics," organ of the A. T. A., in an editorial criticized the War Department for being "railroad-minded" and complained that the railroads were not handling national defense personnel and material in a satisfactory manner and that the truckers were being denied their share of the defense traffic. This allegation was denied by the War Department, which pointed out that it used only that form of transportation best suited to its particular needs. Details of the denial were given in the *Railway Age* for September 21, page 415.

Supply Trade

E. T. Schroeder has been appointed district representative of the **Union Railway Equipment Company,** Chicago, with headquarters at St. Louis, Mo.

Irving H. Jones, formerly manager of railroad sales of the **Timken Steel & Tube Company,** has been appointed manager of railroad sales of the **Allegheny Ludlum Steel Corporation,** Pittsburgh, Pa.

Lee Deutsch, who for many years has been prominently identified with the iron and steel industry and who was formerly president of the Rome Iron Mills, Inc., has been elected a member of the board of directors of the **American Arch Company.**

Equipment and Supplies

Power Purchases Exceed Last Year

Third-quarter review shows; loco. orders 68 p. c. above '39; passenger cars up too

Domestic orders were placed in the United States for 57 locomotives (13 steam and 44 Diesel-electric); 9,470 freight cars and 21 passenger-train cars during September, according to *Railway Age* issues of that month. These compare with 52 locomotives (23 steam, 20 electric and 9 Diesel-electric); 24,231 freight cars and 3 passenger-train cars purchased during September, 1939.

As the year swings into its fourth quarter the cumulative totals for the year (up to September 28) stand at 358 locomotives (144 steam and 214 Diesel-electric); 33,486 freight cars and 182 passenger-train cars. Compared with the record of 213 locomotives, 33,623 freight cars and 177 passenger-train cars for the corresponding three-quarters of last year, 1940 shows a 68 per cent improvement in motive power buying and a substantial increase in purchases of passenger rolling stock. It falls somewhat below 1939 in freight car orders, due chiefly to the extraordinary volume of 24,231 cars booked in that category in September, 1939. The locomotive total for the year thus far exceeds the 12-month figure of any of the years 1931 to 1935, inclusive; falls only 10 short of the all-year total for 1937; is way ahead of 1938's 228 units and is close to the 375 ordered in the whole of 1939. The nine-month freight car figure exceeds the 12-month totals of 1931 to 1935, inclusive, and is more than double that of 1938.

Canadian builders also received orders during September for 500 freight cars and 35 passenger-train cars, which brings their total for the year thus far to 650 freight cars and 65 passenger-train cars.

In addition to the orders reported above there were contemplated purchases of, or inquiries outstanding for (as of October 1), 46 locomotives (23 steam and 23 Diesel-electric); 6,287 freight cars and 54 passenger-train cars. The carriers ordered 115,000 tons of rail during the month of September, as compared with 188,854 tons in September, 1939. The total tonnage for

Domestic Equipment Orders Reported in Issues of The Railway Age in September 1940

LOCOMOTIVES

Date	*Name of Company*	*No.*	*Type*	*Builder*
Sept. 7	Chicago, Milwaukee, St. Paul & Pacific	12	Diesel-electric	Electro-Motive Corp.
		4	Diesel-electric	American Locomotive Co.
		2	Diesel-electric	Baldwin Locomotive Works
Sept. 7	Chicago, St. Paul, Minneapolis & Omaha	2	Diesel-electric	Electro-Motive Corp.
		1	Diesel-electric	American Locomotive Co.
Sept. 14	Chattanooga Traction Co. (Southern Ry.)	2	Diesel-electric Sw.	General Electric Co.
Sept. 21	United States Navy Dept.	1	Diesel-electric	General Electric Co.
Sept. 21	Gulf, Mobile & Ohio	2	Diesel-electric	American Locomotive Co.
Sept. 21	Seaboard Air Line	1	Diesel-electric	Electro-Motive Corp.
Sept. 21	Baltimore & Ohio	7	Diesel-electric	Electro-Motive Corp.
Sept. 21	Boston & Maine	3	4-8-2	Baldwin Locomotive Works
Sept. 28	Chesapeake & Ohio	10	2-6-6-6	Lima Locomotive Co.
Sept. 28	Southern	8	Diesel-electric Sw.	Electro-Motive Corp.
		2	Diesel-electric Sw.	American Locomotive Co.

FREIGHT CARS

Sept. 7	Chicago, Indianapolis & Louisville	100	Hopper	Pullman-Standard
Sept. 14	Chicago, Rock Island & Pacific	200	Box	American Car & Foundry
		100	Gondola	Pullman-Standard
Sept.14	Atlantic Coast Line	600	Auto.-Box	Pullman-Standard
		15	Cov. Hopper	Pullman-Standard
		100	Auto.-Furniture	Mt. Vernon Car
		50	Stock	Mt. Vernon Car
		500	Hopper	Bethlehem Steel Co.
		300	Gondola	Bethlehem Steel Co.
		125	Flat	Greenville Steel Car Co.
Sept. 28	Louisville & Nashville	500	Hopper	Pullman-Standard
Sept. 28	Reading	1,000	Hopper	Company shops
		50	Caboose	Company shops
Sept. 28	Union Pacific	1,000	Ballast	American Car & Foundry
Sept. 28	Norfolk & Western	500	Gondola	Virginia Bridge Co.
		500	Gondola	Ralston Steel Car
Sept. 28	Southern	1,500	Box	Pullman-Standard
		750	Hopper	Pressed Steel Car
		730	Gondola	American Car & Foundry
		250	Gondola	Mt. Vernon Car
Sept. 28	Pere Marquette	200	Box	American Car & Foundry
		150	Box	General American
		150	Box	Pullman-Standard
		100	Auto.-Furniture	Greenville Steel Car Co.

PASSENGER-TRAIN CARS

Sept. 21	Pennsylvania	3	Coach	Edward G. Budd Mfg. Co.
Sept. 21	Seaboard Air Line—Pennsylvania	10	Coach	Edward G. Budd Mfg. Co.
		2	Dining-Lounge	Edward G. Budd Mfg. Co.
		3	Tavern-Observation	Edward G. Budd Mfg. Co.
		3	Passenger-Baggage-Dormitory	Edward G. Budd Mfg. Co.

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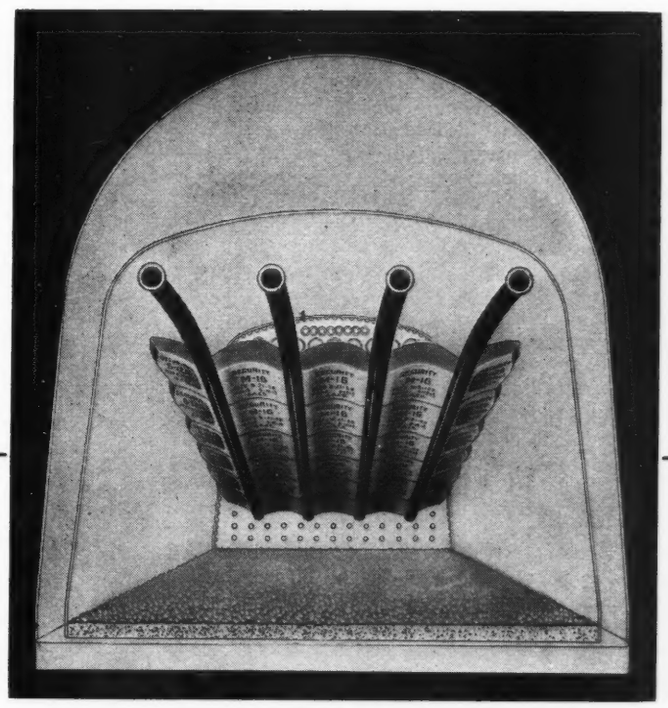
A CORRECT BRICK ARCH GUARANTEES

FULL FUEL ECONOMY

There is a carefully worked out design of the Security Brick Arch for every class of locomotive . . . This design guarantees maximum efficiency both as to fuel economy and hauling capacity . . . In modernizing existing power and in maintaining locomotives in active service, be sure the correct brick arch design is installed and be sure it is completely maintained.



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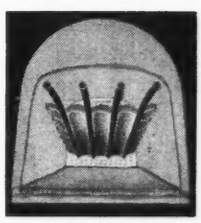

AMERICAN ARCH CO.
INCORPORATED

Locomotive Combustion Specialists » » »

the first nine months of the year now stands at 281,842 tons, as compared with 721,737 tons in the corresponding period of 1939. American mills also received an order for 22,500 tons of rail for export during the month.

LOCOMOTIVES

The purchase of 14 steam locomotives, six Diesel-electric switching locomotives and 35,000 tons of rails has been authorized by the directors of the Northern Pacific.

FREIGHT CARS

THE NORTHERN PACIFIC is inquiring for from 500 to 2,000 box cars.

THE PACIFIC FRUIT EXPRESS COMPANY is contemplating the purchase of an undetermined number of refrigerator cars.

THE TENNESSEE CENTRAL has ordered 65 hopper cars from the Pullman-Standard Car Manufacturing Co.

THE NEW YORK CENTRAL has ordered 1,000 70-ton h. s. gondola cars from Despatch Shops, Inc., East Rochester, N. Y., for service on the Pittsburgh & Lake Erie.

THE CHICAGO, INDIANAPOLIS & LOUISVILLE has ordered twenty 50-ton ballast cars from the American Car & Foundry Company.

THE CHICAGO & EASTERN ILLINOIS has purchased from a broker 200 50-ton rebuilt hopper cars formerly owned by the Public Service Company of New Jersey.

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE has ordered 500 freight cars from the Pullman-Standard Car Manufacturing Company, including 400 box cars and 100 automobile cars.

THE DULUTH, MISSABE & IRON RANGE has ordered 30 ballast cars and 10 covered hopper cars from the American Car & Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of August 31, page 321.

THE ATLANTIC COAST LINE has ordered 128 automobile-box cars from the Pullman-Standard Car Manufacturing Company. These are in addition to the 600 reported in the *Railway Age* of September 14.

THE BALTIMORE & OHIO, by authorization of its board of directors, will purchase 1,000 steel hopper cars and construct 1,000 50-ton, wagon-top box cars in company shops. The latter group of cars will be fabricated in the road's forge shop at Cumberland, Md.

IRON AND STEEL

THE SOUTHERN PACIFIC is expected to enter the market for 60,000 tons of rails.

Financial

BOSTON & MAINE.—*Bonds of the Vermont Valley.*—Division 4 of the Interstate Commerce Commission has authorized the Vermont Valley to issue $1,500,000 of first mortgage, sinking fund, four per cent bonds, to be sold at par and accrued interest, the proceeds to be used to retire $1,500,000 of first mortgage 4½ per cent bonds. The new bonds will be dated October 1, and will mature October 1, 1955.

CHESAPEAKE & OHIO. — *Bonds.* — This company has asked the Interstate Commerce Commission for authority to (1) extend to March 1, 1992, the date of maturity of $604,000 of first mortgage, four per cent, gold bonds issued and outstanding under the first mortgage of the Greenbrier, dated October 23, 1900, and maturing November 1, 1940; (2) to assume liability as primary obligor in respect of the bonds; (3) to reduce the interest rate for the extended period from four to 3½ per cent; and (4) to sell the bonds at par to the Manufacturers Trust Company, as trustee under the first mortgage dated October 1, 1887, of the Covington & Cincinnati Elevated Railroad & Transfer & Bridge Company.

DETROIT, TOLEDO & IRONTON.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a line extending from Jeffersonville, Ohio, to Sedalia, seven miles.

GEORGIA & FLORIDA.—*Acquisition and Operation.*—This company has asked the Interstate Commerce Commission for authority to acquire by lease and operate the property of the Statesboro Terminal in Statesboro, Ga.

GREAT NORTHERN.—*Bond Issue.*—An issue of $20,000,000 of 4 per cent collateral trust bonds of this road was offered to the public by Dick & Merle-Smith; Salomon Brothers & Hutzler and Stroud & Co., all of New York, on October 1. Offering followed sale of the issue to the financial houses by the Reconstruction Finance Corporation at 102½ and interest.

The public offering comprised the unsold portion of $7,000,000 of serial bonds, due $500,000 each from July, 1941 to 1946, and $800,000 each from 1947 to 1951, together with $13,000,000 term bonds due January 1, 1952. The serial issue was priced to yield 0.50 to 3.60, while the term bonds were sold at 103 and accrued interest. Bonds are secured by deposit with the trustee of $40,000,000 principal amount of Great Northern general mortgage, 4 per cent bonds, Series J, due January 1, 1952, none of which collateral may be withdrawn until retirement of all the collateral trust bonds.

HUDSON & MANHATTAN.—*Fare Rise Denied.*—A three-judge federal appellate court at Newark, N. J., has sustained a decision of the federal district court dated July 17 upholding the Interstate Commerce Commission in its decision of July 11, 1938, allowing this road a fare of eight cents between stations in Jersey City, N. J., Hoboken and downtown New York but rejecting its request for a ten-cent fare for the same journeys. The court held that the eight-cent rate would produce higher revenue over a period of time than the higher one requested and declared that the difference in cost per passenger as between the downtown and uptown movements required a differential in favor of the former. The uptown rate has been 10 cents for a number of years.

NEW YORK CONNECTING.—*Bond Refunding Issue.*—An underwriting group headed by Morgan Stanley & Co. and Kuhn, Loeb & Co., of New York, are planning to offer in the near future an issue of $27,300,000 3½ per cent first mortgage bonds, to mature in 1965, of the "Hell Gate" road. Proceeds will be used to refund outstanding first mortgage 4½s and 5s due 1953, both of which are guaranteed by the Pennsylvania and New York, New Haven & Hartford which hold joint control over the Connecting.

NORTHEAST OKLAHOMA. — *Operation.* — This company has asked the Interstate Commerce Commission for authority to operate, under a trackage agreement, over a line of the Joplin-Pittsburgh, 1.9 miles, in Crawford County, Kans.

OUACHITA & NORTH WESTERN.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a portion of its line extending from Clarks, La., westerly to Gulf Crossing, 24 miles.

PENNSYLVANIA.—*Approval of Operating Agreement.*—Division 4 of the Interstate Commerce Commission has approved a supplementary agreement between this company and the Long Island whereby the rental paid by it for operating over the Long Island in New York City would be reduced by approximately $1,000,000 a year.

PITTSBURGH & WEST VIRGINIA.—*Loan Funding Plan.*—President Charles J. Graham of this road announced on September 27 that its plan to fund its entire floating debt, which was authorized by the Interstate Commerce Commission on July 23 (see the *Railway Age* for August 3, page 198) has been completed and is now in effect. As a result all of the company's Reconstruction Finance Corporation, bank and other short-term loans have been paid in full through the issuance of $7,400,000 of Five-Year 4 per cent secured notes of the road dated July 1, 1940, and which will mature July 1, 1945.

Mr. Graham also announced that the company had received agreements or commitments on the part of the holders of 95 per cent of the $2,564,000 face amount of outstanding bonds of Pittsburgh Terminal Coal Corporation to extend the effective date of the guaranty of the payment of the principal by the Pittsburgh & West Virginia from July 1, 1942, to July 1, 1952, and that such agreements have become effective as a part of the plan of financial readjustments thus completed. This financial program, Mr. Graham stated, leaves

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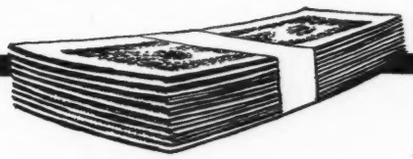
IT PAYS TO BE *Sure*

WHEN THOUSANDS OF DOLLARS ARE INVOLVED



THE cost of an average locomotive runs into thousands of dollars; and yet the efficiency of the locomotive is dependent to a large extent upon the application of a superheater that will completely and efficiently meet all the requirements of the boiler.

It is apparent there will be a large loss of dollars through loss of power, if the superheater installed is incapable of meeting all the requirements of the boiler.

The Superheater Company, with its 30 years of experience, will be glad to advise you as to the correct superheater design for your particular power—call on us and BE SURE.

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the railway company with no debt maturities until 1945, other than the regular annual maturities of its equipment trust certificates and its obligations with respect to $128,000 of unextended bonds of Pittsburgh Terminal Coal Corporation. The several series of outstanding bonds of the Pittsburgh & West Virginia do not mature until 1958, 1959 and 1960.

SEABOARD AIR LINE-ATLANTIC COAST LINE.—*Bonds of the Tampa Union Station.*—The Tampa Union Station has asked authority from the Interstate Commerce Commission to issue and sell $225,000 of first mortgage four per cent bonds, to be dated October 1, 1940, and to mature October 1, 1958, the proceeds to be used to retire a like amount of 30-year, first mortgage, five per cent bonds, dated November 1, 1910, and due November 1, 1940. At the same time the Seaboard Air Line and the Atlantic Coast Line, who own the common stock of the company and use its facilities, have asked the commission for authority to assume liability for the payment of the new bonds.

SOUTHERN.—*M. & O. Stock Certificates.*—The Southern is reported as notifying registered holders of Southern-Mobile & Ohio 4 per cent stock trust certificates that its semi-annual dividend payable on October 1 will be the last until determination by the courts of the liability of the Southern to continue payments under a perpetual guarantee. Court action referred to is that brought by minority stockholders of the former M. & O. in the Supreme Court of New York asking that the exchange of M. & O. stock certificates for stock trust certificates be declared cancelled and trustees be required to return stock certificates. When the Southern acquired a majority of M. & O. stock in 1901, it issued in exchange perpetual stock trust certificates.

It is the claim of the Southern that since, in reorganization of the Mobile & Ohio and its merger with the Gulf, Mobile & Northern, its stock was found to be without value, no further payments on the certificates should be made until court determination of its obligation.

SOUTHERN PACIFIC.—*Equipment Trust Certificates.*—This company has been authorized to assume liability for $11,820,000 of 2¼ per cent equipment trust certificates, maturing in 15 equal annual installments of $788,000 on October 1 in each of the years from 1941 to 1955, inclusive. The issue has been sold at 96.777 to Halsey, Stuart & Co., acting on behalf of itself and a group of associates, making the average annual cost to the company approximately 2.73 per cent.

Dividends Declared

Norfolk & Western.—Preferred, $1.00, quarterly, payable November 19 to holders of record October 31.

Reading.—25¢, quarterly, payable November 14 to holders of record October 17.

Average Prices of Stocks and Bonds

	Oct. 1	Last week	Last year
Average price of 20 representative railway stocks..	30.40	30.45	35.09
Average price of 20 representative railway bonds..	60.58	60.56	59.96

Railway Officers

EXECUTIVE

A. C. Shields, vice-president and general manager of the Pittsburg & Shawmut, has been elected president and general manager, with headquarters as before at Kittanning, Pa.

TRAFFIC

W. J. Murray has been appointed general agent of the Erie, with headquarters at Washington, D. C.

M. H. McClure, perishable freight agent for the Missouri-Kansas-Texas at Dallas, Tex., has been promoted to general agent at Corpus Christi, Tex., a newly created position.

W. K. Helms has been appointed general agent of the Atlantic Coast Line, the Charleston & Western Carolina and the Columbia, Newberry & Laurens at Kingsport, Tenn., a newly created position.

George F. Harrigan, perishable freight agent for the Wabash at Harlingen, Tex., has been promoted to general agent, freight department, at Pittsburgh, Pa., succeeding **G. N. Thomas,** who retired on October 1.

C. E. Alwes, traveling freight agent for the Wabash at Indianapolis, Ind., has been promoted to general agent, freight department, at that point, succeeding **A. S. Birchett,** who has been transferred to Milwaukee, Wis. Mr. Birchett succeeds **George W. Callen,** whose death on September 2 is announced elsewhere in these columns.

J. L. Carney, traveling coal freight agent of the Western Maryland at New York, has been appointed general agent-coal department, with headquarters at Boston, Mass. **W. K. Gronemann** has been appointed soliciting freight agent at New York, succeeding **J. H. McLaughlin,** who has been appointed traveling coal freight agent at New York, to succeed Mr. Carney.

As announced in the *Railway Age* of September 28, **A. F. LaBundy,** traveling passenger agent for the Pere Marquette at Chicago, has been promoted to general western passenger agent, with the same headquarters. Mr. LaBundy succeeds **J. Edward Reilly,** who retired on October 1, instead of **R. W. Ohlman,** as incorrectly announced in that issue. Mr. Ohlman, city passenger agent at Chicago, was promoted to traveling passenger agent, succeeding Mr. LaBundy, and **H. C. Wilson,** passenger representative at Grand Rapids, Mich., was advanced to city passenger agent at Chicago, replacing Mr. Ohlman.

D. E. Gilbert, assistant general freight and passenger agent on the Wabash at Toledo, Ohio, has been promoted to assistant freight traffic manager, with headquarters at Detroit, Mich., succeeding **J. A. Sullivan,** who retired on September 30.

Phil Schorr, division freight agent at Detroit, has been advanced to assistant general freight and passenger agent at Toledo, replacing Mr. Gilbert. The position of division freight agent at Detroit has been abolished. **H. W. Cook,** general agent at Dallas, Tex., has been promoted to assistant general freight agent at Detroit, a newly created position, and **J. S. Buchanan,** general agent, freight department at Toronto, Ont., has been appointed general agent at Dallas, relieving Mr. Cook. **J. C. Law,** traveling freight agent at Toronto, has been advanced to general agent, freight department, at that point succeeding Mr. Buchanan.

Lemuel L. Doss, whose appointment as assistant freight traffic manager of the Atlantic Coast Line at Wilmington, N. C., was noted in the *Railway Age* of September 14, was born at Canton, Ga., on March 30, 1896. He entered railroad service on May 1, 1915, as clerk in the freight traffic department of the Atlantic Coast Line

Lemuel L. Doss

at Savannah, Ga., remaining with that road until furloughed for military service. From August 5, 1917, to March 1, 1919, he served in the 61st Artillery, C. A. C., United States Army. Mr. Doss served as traffic manager for the South Atlantic Forwarding Company at Savannah from January 1 to August 15, 1920. On August 20, 1920, he re-entered the employ of the Atlantic Coast Line as clerk in the freight traffic department at Wilmington, in which department he has since remained. On February 1, 1925, he became chief rate clerk; on March 1, 1926, commerce agent; on February 1, 1930, assistant general freight agent; and on July 1, 1935, general freight agent, the position he held until his recent appointment as assistant freight traffic manager.

James L. Wells, whose appointment as assistant freight traffic manager of the Atlantic Coast Line at Wilmington was reported in the *Railway Age* of September 14, was born on July 23, 1889, at Wallace, N. C. Mr. Wells entered railroad service on September 1, 1910, with the Atlantic Coast Line as clerk to the auditor of freight receipts at Wilmington. From May 13, 1917, to February, 1919, he served in the World War, returning to the accounting department of the Atlantic Coast Line

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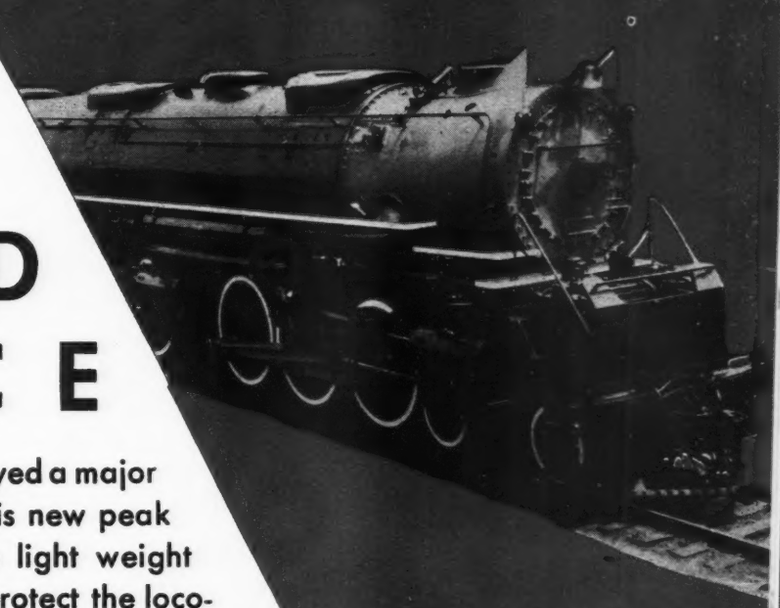
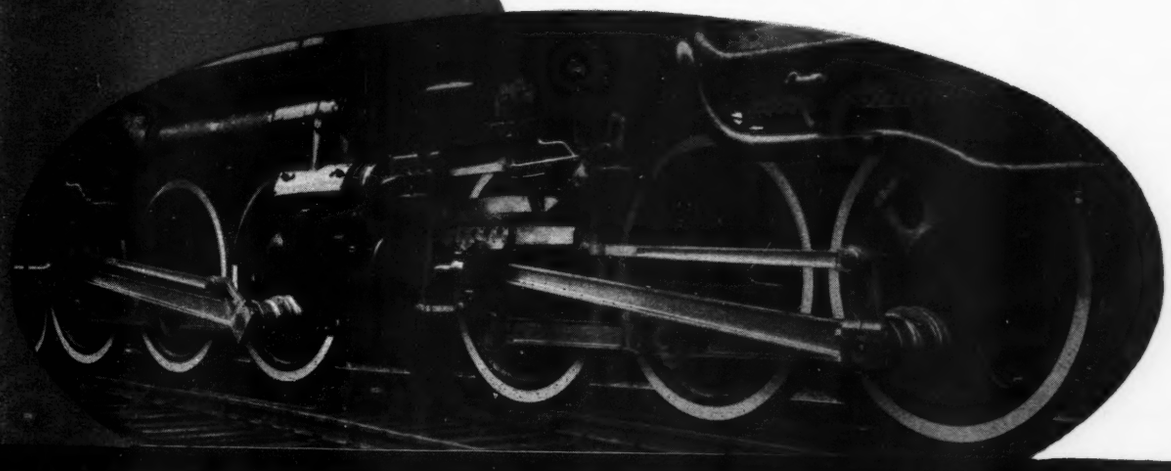
HIGH SPEED SERVICE



ALCO quality forgings have played a major role in the attainment of this new peak of locomotive perfection. Alco light weight reciprocating parts not only protect the locomotive investment—but minimize rail pounds at the higher speeds and produce important economies in track and locomotive maintenance...Their unsurpassed strength and unfailing performance insures the continued serviceability and high availability of the locomotives in this heavy high speed service.

The manufacture of high grade steel forgings is and always has been one of Alco's outstanding specialties. And now with plant facilities modernized to produce the finest light weight alloy steel forgings, Alco is in a position to serve you better than ever before.



AMERICAN LOCOMOTIVE COMPANY

30 CHURCH STREET NEW YORK·N·Y

on the latter date. In January, 1920, Mr. Wells entered the United States Navy under contract, selling surplus war stock. On March 15, 1922, he returned to the

James L. Wells

Atlantic Coast Line as traveling freight agent at Miami, Fla., and was appointed commercial agent at Richmond, Va., on May 15, 1923, being transferred to Sanford, Fla., on March 1, 1924. On March 11, 1929, Mr. Wells was appointed assistant general freight agent at Miami, Fla., and became general freight agent at Wilmington on October 10, 1937, which position he held until his recent appointment as assistant freight traffic manager.

OPERATING

P. T. McCarthy, acting superintendent of the Washington division of the Union Pacific, with headquarters at Spokane, Wash., has been appointed superintendent of that division, with the same headquarters.

Oscar R. Swanson, chief clerk to the chief operating officer of the Chicago, Rock Island & Pacific, has been promoted to assistant to the chief operating officer, with headquarters as before at Chicago. Mr. Swanson was born at Danville, Ill.,

Oscar R. Swanson

on July 23, 1892, and entered railway service on the Chicago & Eastern Illinois in 1909, in the office of the master mechanic at Villa Grove, Ill. He was later promoted to chief clerk of that office and on November 1, 1915, he went with the Rock Island in the signal department at Chicago. Mr. Swanson was transferred to the vice-president's office in June, 1917, and later served as secretary to the assistant vice-president, transportation clerk and wage schedule statistician. On May 1, 1939, he was promoted to chief clerk to the chief operating officer, the position he held until his recent promotion on October 1.

Captain Frank H. Cogan, assistant manager of the marine department of the Delaware, Lackawanna & Western, has been promoted to manager of the marine department, with headquarters at New York, succeeding **Captain John M. Emery,** who at his own request has been relieved of active duty and will become consulting marine engineer.

Luke W. Nolan, assistant superintendent on the New York, New Haven & Hartford, at Providence, R. I., has been appointed superintendent of passenger transportation at New Haven. **F. C. Palmer,** trainmaster at Worcester, Mass., has been appointed assistant superintendent at Providence. **W. L. Elliot,** superintendent of passenger transportation, has been appointed assistant superintendent at Hartford, Conn. **J. J. McIsaac,** assistant trainmaster on the Boston division, has been promoted to trainmaster at Framingham, Mass. **R. J. Duggan,** general yardmaster-stationmaster at New London, Conn., has been appointed trainmaster at Worcester. **D. D. Seward,** freight and passenger conductor, has been appointed assistant trainmaster on the New Haven division. **C. D. Kelly,** operator on the New York division, has been appointed assistant trainmaster on the New Haven division.

John M. Budd, trainmaster on the Great Northern at Spokane, Wash., has been promoted to superintendent of the Klamath division, with headquarters at Klamath Falls, Ore., succeeding **M. L. Gaetz,** who has been transferred to the Minot division, with headquarters at Minot, N. D., relieving **M. J. Walsh.** Mr. Walsh has been transferred to the Willmar division, with headquarters at Willmar, Minn., replacing **C. T. Kenney,** who has resigned. **J. E. O'Brien** has been appointed trainmaster at Spokane, succeeding Mr. Budd.

FINANCIAL, LEGAL AND ACCOUNTING

J. C. Hill, paymaster for the Western region of the Canadian National, with headquarters at Winnipeg, Man., retired on September 30.

L. W. McCoy, assistant general auditor of the Bessemer & Lake Erie, has been elected general auditor, with headquarters as before at Pittsburgh, Pa., succeeding **James C. McKalip,** retired.

John Louis Gaston, who retired on October 1, 1932, as general claim agent of the Gulf Coast Lines (Missouri Pacific), died of heart failure at his home in Houston, Tex., on September 3. Mr. Gaston was born in Ohio on May 7, 1862, and entered the service of the St. Louis-San Francisco as a telegrapher at Carthage, Mo., at the age of 16, later being promoted to agent, claim agent and assistant general claim agent at St. Louis, Mo. On October 1, 1907, he was appointed general claim agent for the Frisco lines at Beaumont, Tex., now comprising the Missouri Pacific lines between New Orleans, La., and Houston. In 1910, he was transferred to Houston, and in 1919 he was appointed general claim agent for the Gulf Coast Lines, which position he held until his retirement. Mr. Gaston was a charter member of the National Association of Railway Claim Agents, which was organized in 1890.

PURCHASES AND STORES

Franklin J. Steinberger, division storekeeper on the Atchison, Topeka & Santa Fe at Albuquerque, N. M., has been promoted to assistant general storekeeper, a newly created position, with headquarters at Topeka, Kan. Mr. Steinberger was born on September 24, 1898, and entered railway service on the Santa Fe in 1920 as a laborer in the storehouse at San Bernardino, Cal. In progression he held every position in the store department, becoming division storekeeper at Seligman, Ariz., in 1924. In 1928, he was appointed traveling storekeeper at San Bernardino, and in October, 1939, he was appointed division storekeeper at Albuquerque, the position he held until his recent promotion, which was effective October 1.

ENGINEERING AND SIGNALING

L. W. Funk, assistant engineer on the Charleston & Western Carolina, has been appointed engineer maintenance of way, with headquarters as before at Augusta, Ga.

J. N. Grim, division engineer of the River division of the New York Central at Weehawken, N. J., has been transferred to the Eastern division at New York, succeeding **J. H. Kelly,** who has been transferred to the Electric division, with the same headquarters. **R. R. Smith,** supervisor of track at Batavia, N. Y., has been appointed division engineer of the Pennsylvania division at Jersey Shore, Pa., succeeding **E. J. Bayer,** who has been transferred to the River division at Weehawken, N. J.

S. R. Hursh, engineer, maintenance of way, of the Eastern Pennsylvania division of the Pennsylvania, has been appointed acting chief engineer, maintenance of way, of the Eastern region, relieving **H. H. Garrigues,** who has been granted a leave of absence because of illness, and **J. M. Fox,** division engineer of the New York division, with headquarters at Jersey City, N. J., has been promoted to engineer maintenance of way, of the Eastern Pennsylvania general division, succeeding Mr. Hursh. **D. E. Rudisill,** division engineer of the St. Louis division, with headquarters at Terre Haute, Ind., has been transferred to the New York division, replac-

ing Mr. Fox, and **G. M. Hain,** division engineer of the Toledo division, with headquarters at Toledo, Ohio, has been transferred to the St. Louis division, relieving Mr. Rudisill. **D. E. Smucker,** assistant division engineer of the Fort Wayne division, has been promoted to division engineer of the Toledo division, succeeding Mr. Hain.

John L. Gressitt, chief engineer maintenance of way of the Western region of the Pennsylvania, with headquarters at Chicago, has been promoted to assistant chief engineer of maintenance of way, system, with headquarters at Philadelphia, Pa., succeeding **Robert Faries,** whose death on September 8 was announced in the *Railway Age* of September 14. **Charles G. Grove,** engineer, maintenance of way, of the Southwestern general division, with headquarters at Indianapolis, Ind., has been advanced to chief engineer, maintenance of way, of the Western region, relieving Mr. Gressitt. **Walter R. Parvin,** division engineer in the office of the chief

John L. Gressitt

engineer of the system at Philadelphia, has been promoted to engineer, maintenance of way, of the Southwestern genral division, with headquarters at Indianapolis, replacing Mr. Grove. A biographical sketch and photograph of Mr. Grove were published in the *Railway Age* of June 22, pages 1145 and 1146, following his promotion to engineer, maintenance of way, of the Southwestern general division on June 16, 1940.

Mr. Gressitt was born at Baltimore, Md., on April 4, 1887, and was educated at the Baltimore Polytechnic Institute and at Lehigh University, graduating from the latter with a degree in civil engineering. He entered railway service on August 4, 1908, on the engineering corps of the Pittsburgh division of the Pennsylvania, being advanced through the positions of chainman, rodman and transitman. On May 1, 1915, he was promoted to assistant supervisor of track on the Bellwood division, later serving in this position at Williamsport, Pa., and at Philadelphia. From October 1, 1917, to July 10, 1919, he was in military service with the 21st Engineers. After the war he returned to the service of the Pennsylvania as acting supervisor on the Monongahela division, later being promoted to supervisor, in which capacity he served during the next seven years on the Monongahela, Philadelphia Terminal and Pittsburgh divisions. He was promoted to division engineer of the Fort Wayne division on January 16, 1927, being further advanced to superintendent of the Sunbury division, with headquarters at Sunbury, Pa., on December 1, 1929. On June 1, 1931, he was transferred to the St. Louis division at Terre Haute, and on November 1, 1931, he was promoted to general superintendent of the Southwestern division, with headquarters at Indianapolis. Mr. Gressitt was transferred to Chicago two years later, and on January 1, 1936, he was promoted to chief engineer, maintenance of way, of the Western region, with the same headquarters, the position he held until his recent promotion, which was effective October 1.

MECHANICAL

Fred J. Fahey, master mechanic on the New York Central at Albany, N. Y., has been appointed assistant superintendent of equipment, with headquarters at New York, succeeding **Charles F. Parsons,** who has retired. **Charles A. Pease,** assistant master mechanic at Albany, has been promoted to master mechanic there. **Fred H. Renner** has been appointed assistant master mechanic at Albany.

Samuel A. Chamberlin, superintendent of motive power of the Lake Superior & Ishpeming, with headquarters at Marquette, Mich., retired on October 1, and **Fred Waller,** general foreman of the mechanical department, has been appointed master mechanic, with headquarters as before at Marquette.

Mr. Chamberlin was born at Fox Lake, Wis., on March 27, 1867, and entered railway service on May 25, 1882, as a machinist at Saginaw, Mich., on the Flint & Pere Marquette (now part of the Pere Marquette), later becoming an air brake foreman and roundhouse foreman on the Detroit, Lansing & Northern (now part of the Pere Marquette). In 1900, he was promoted to general foreman on the Pere Marquette at Muskegon, Mich., and a year later he was advanced to master mechanic, serving in that capacity at Ionia, Mich., Grand Rapids and Saginaw. In 1914, he went with the Bureau of Valuation of the Interstate Commerce Commission as senior inspector of motive power and four years later he was appointed senior mechanical engineer. Mr. Chamberlin was appointed superintendent of motive power of the Lake Superior & Ishpeming in April, 1919, which position he held until his retirement.

OBITUARY

James B. Connors, former vice-president of the Switchmen's Union of North America and vice-president emeritus of the Illinois State Federation of Labor, died on September 20 at the age of 88 in St. Joseph's hospital, Chicago. Mr. Connors was born at Watertown, N. Y., and entered railway service as a water boy on maintenance of way work on the New York Central at that point. He later became a fireman and then a switchman and in 1876 he went with the Chicago & Alton (now the Alton) as a switchman at Chicago. He was active in the early organization of the switchmen's union, and became a national organizer and then vice-president, which position he held until his retirement several years ago.

Arthur Comstock Watson, chief engineer of the New York Zone of the Pennsylvania and the Long Island at New York, whose death on September 23 was reported in the *Railway Age* of September 28, was born at Canton, Ohio, on

Arthur Comstock Watson

July 11, 1881. He attended Westfield Academy at Westfield, N. Y.; New Castle, Pa., high school and in 1902 received the degree of Bachelor of Arts at Washington & Jefferson College. Mr. Watson entered the service of the Pennsylvania as a chainman on the Erie & Ashtabula division in 1899, later leaving this work to continue his education. In July, 1902, he returned to the Pennsylvania as an assistant on the engineering corps. In April, 1903, he entered the employ of the Illinois Central, serving in various capacities, including that of assistant engineer at Vicksburg, Miss. In April, 1904, he entered the service of the Vandalia (now part of the Pennsylvania system) and subsequently served as an assistant engineer on the Indianapolis Terminal, Vincennes, Richmond, Western, Cleveland and Pittsburgh divisions. In January, 1913, he became division engineer on the Zanesville, Ohio, division, and later held that position on the Logansport, Cleveland and Pittsburgh divisions. In March, 1920, he was promoted to superintendent of the Richmond division and in January, 1922, he was transferred to the Schuylkill division. Mr. Watson became superintendent of the Conemaugh division in March, 1923, being transferred to the Cleveland and Pittsburgh division in January, 1926, and to the Middle division in June, 1926. In February, 1927, Mr. Watson was appointed chief engineer of the Long Island and in October, 1928, he was given the additional title of chief engineer of the New York Zone of the Pennsylvania, in which capacity he served until his death. Mr. Watson had supervision over the improvement of the Jersey City waterfront facilities; the building of the new Newark terminal and the elimination of many grade crossings on Long Island.

Table of Freight Operating Statistics Appears on second left-hand page

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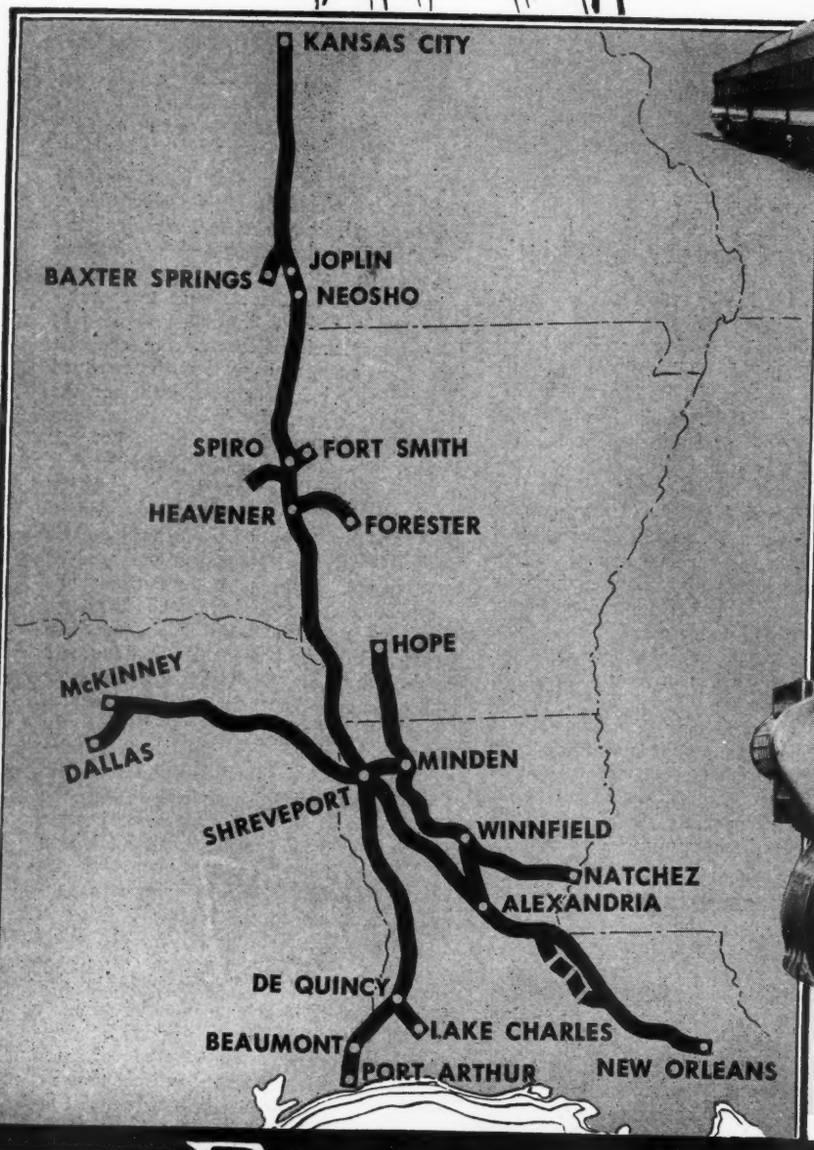
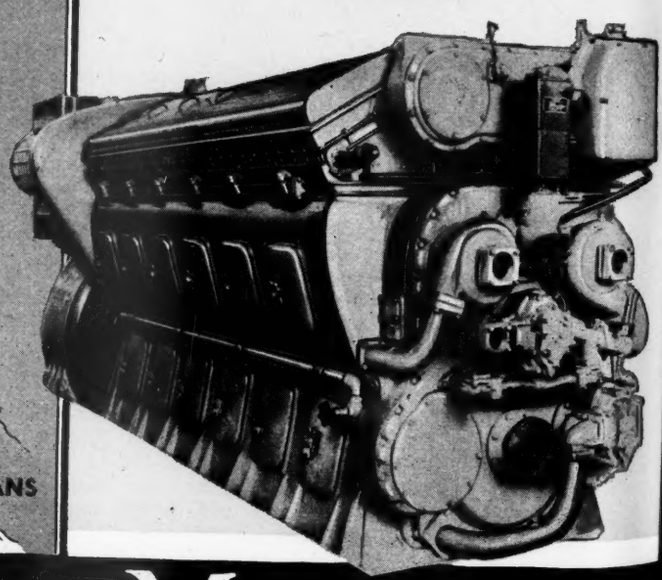


GM
GENERAL MOTORS
DIESEL POWER



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HATS OFF to the "Southern Belle" and the new deluxe Diesel service of the Kansas City Southern — Louisiana & Arkansas Lines. In keeping with her slogan "Sweetheart of American Trains," the "Southern Belle" provides new high standards of travel comfort—faster schedules—with maximum safety—between Kansas City and New Orleans... To maintain daily service in each direction, three "Southern Belles" are required—Each EMC Diesel locomotive powered by two 1000 Hp. General Motors Diesel engines.

CORPORATION

LA GRANGE, ILLINOIS, U. S. A.

Freight Operating Statistics of Large Steam Railways—Selected Items for the Month of July,

Region, road, and year		Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross excluding locomotives and tenders	Ton-miles (*thousands*): Net revenue and non-revenue	Number of road locomotives on line: Serviceable: Not stored	Number of road locomotives on line: Serviceable: Stored	Number of road locomotives on line: Unserviceable	Number of road locomotives on line: Per cent unserviceable
New England Region:													
Boston & Albany	1940	362	133,435	138,268	9,481	2,851	63.6	169,735	60,929	56	7	22	25.9
	1939	362	117,065	120,916	8,537	2,575	65.2	146,129	50,309	55	9	24	27.3
Boston & Maine	1940	1,892	277,348	312,775	25,292	9,382	67.2	540,637	204,653	128	1	46	26.3
	1939	1,915	249,133	273,572	22,124	8,529	68.8	476,140	174,635	121	4	59	32.1
N. Y., New Hav. & Hartf.	1940	1,841	342,841	428,978	28,428	11,778	64.4	672,564	252,262	187	8	59	25.0
	1939	1,840	326,957	406,912	23,952	11,232	64.9	624,448	227,112	171	5	87	32.5
Great Lakes Region:													
Delaware & Hudson	1940	846	246,092	318,513	34,034	8,113	61.5	525,976	244,470	128	39	81	32.7
	1939	847	209,687	271,817	27,606	7,088	64.2	439,617	203,701	112	60	76	30.6
Del., Lack. & Western	1940	983	339,149	381,869	49,215	11,818	66.2	712,099	283,491	135	9	58	28.7
	1939	983	321,180	356,476	47,723	11,012	68.7	630,081	243,575	119	11	77	37.2
Erie (incl. Chi. & Erie)	1940	2,268	690,235	728,716	43,231	29,710	63.6	1,911,012	724,367	227	28	169	39.9
	1939	2,290	620,349	657,665	35,739	27,205	65.0	1,660,408	590,539	208	28	236	50.0
Grand Trunk Western	1940	1,023	204,752	206,210	1,060	5,878	61.7	366,199	129,774	67	11	20	20.4
	1939	1,023	203,528	203,810	1,230	5,466	61.0	340,164	117,064	64	8	30	29.4
Lehigh Valley	1940	1,252	317,565	344,681	47,726	12,013	64.0	782,645	334,015	124	5	84	39.4
	1939	1,265	272,618	297,628	43,315	10,889	65.7	667,165	270,195	115	..	113	49.6
New York Central	1940	10,563	2,582,867	2,756,119	170,076	84,679	59.3	5,909,816	2,525,183	883	146	331	24.3
	1939	10,609	2,320,815	2,448,779	142,476	76,433	59.8	5,210,535	2,180,042	763	195	473	33.1
N. Y., Chicago & St. Louis	1940	1,672	499,635	506,715	6,061	17,772	62.0	1,120,179	415,913	164	15	19	9.6
	1939	1,672	466,497	473,066	5,725	16,764	63.1	1,015,630	365,198	145	11	42	21.2
Pere Marquette	1940	2,080	325,409	331,326	7,096	8,267	59.8	554,848	215,028	109	8	43	26.9
	1939	2,081	309,566	314,585	6,098	7,731	60.4	513,104	199,858	102	10	49	30.4
Pittsburgh & Lake Erie	1940	233	84,117	87,428	.....	3,497	60.9	307,686	177,413	37	9	19	29.2
	1939	233	62,955	64,180	60	2,880	60.0	253,088	144,383	31	8	36	48.0
Wabash	1940	2,397	550,631	565,075	12,303	17,119	63.8	1,064,113	392,276	131	14	121	45.5
	1939	2,397	562,825	572,505	11,740	17,131	62.7	1,052,099	360,659	133	12	125	46.3
Central Eastern Region:													
Baltimore & Ohio	1940	6,261	1,562,935	1,938,821	204,672	49,823	60.5	3,557,050	1,611,932	725	99	384	31.8
	1939	6,278	1,387,579	1,700,930	176,217	44,332	61.2	3,099,294	1,389,307	592	100	526	43.2
Central of New Jersey	1940	679	163,895	182,882	31,880	5,136	59.6	367,538	174,243	74	8	63	43.4
	1939	679	147,809	167,669	27,527	4,605	61.7	318,926	151,296	69	2	84	54.2
Chicago & Eastern Illinois	1940	925	171,953	171,955	3,321	4,184	64.8	264,714	111,964	56	3	31	34.4
	1939	927	163,660	163,921	3,065	4,058	67.8	248,298	106,696	51	6	38	40.0
Elgin, Joliet & Eastern	1940	390	106,526	108,214	1,474	2,700	57.7	213,640	103,300	55	..	21	27.6
	1939	390	83,898	84,820	937	1,960	59.2	148,509	69,852	52	8	23	27.7
Long Island	1940	375	26,299	27,462	17,216	254	50.7	19,360	7,214	34	9	5	10.4
	1939	379	23,288	24,282	16,385	240	51.3	18,634	7,225	33	4	11	22.9
Pennsylvania System	1940	9,966	3,072,224	3,705,047	403,667	114,066	59.9	8,158,490	3,642,840	1,321	155	767	34.2
	1939	9,967	2,511,350	3,034,188	352,602	96,916	61.4	6,584,814	2,851,615	1,120	89	1,085	47.3
Reading	1940	1,442	409,056	452,100	52,233	11,978	60.6	880,261	426,124	212	14	146	39.2
	1939	1,442	362,739	398,473	47,838	10,505	61.0	757,160	361,206	182	14	170	46.4
Pocahontas Region:													
Chesapeake & Ohio	1940	3,044	905,318	953,014	42,278	41,747	55.8	3,558,061	1,947,965	372	47	84	16.7
	1939	3,055	839,668	877,796	39,493	39,222	55.5	3,375,694	1,850,021	352	43	132	25.0
Norfolk & Western	1940	2,169	676,818	705,042	35,528	30,843	56.9	2,623,910	1,380,938	279	45	33	9.2
	1939	2,169	637,316	666,637	35,466	27,684	56.9	2,336,905	1,227,064	279	56	29	8.0
Southern Region:													
Atlantic Coast Line	1940	5,074	571,207	574,792	8,633	11,410	63.4	684,685	252,352	266	35	43	12.5
	1939	5,077	545,486	547,647	7,676	10,905	63.3	632,880	222,482	228	37	108	29.0
Central of Georgia	1940	1,831	285,525	288,263	4,940	5,732	66.8	333,366	121,700	96	..	24	20.0
	1939	1,838	245,889	246,978	3,440	5,181	71.6	285,176	108,761	92	..	30	24.6
Illinois Central (incl. Y. & M. V.	1940	6,557	1,202,993	1,207,914	22,950	33,965	60.0	2,232,804	896,016	576	73	160	19.8
	1939	6,537	1,129,172	1,133,640	20,862	32,311	62.4	2,037,265	814,745	524	101	230	26.9
Louisville & Nashville	1940	4,862	1,125,363	1,217,977	32,014	27,707	58.7	1,993,419	946,961	348	46	92	18.9
	1939	4,898	1,034,588	1,120,058	28,100	25,400	59.8	1,789,592	851,313	321	16	212	38.6
Seaboard Air Line	1940	4,301	523,444	541,547	2,818	12,259	61.8	760,118	292,800	225	27	52	17.1
	1939	4,305	470,951	483,992	4,100	11,639	67.0	672,689	261,014	209	30	61	20.3
Southern	1940	6,548	1,374,890	1,398,875	21,103	30,902	64.7	1,839,893	726,998	494	1	148	23.0
	1939	6,626	1,295,259	1,312,604	18,738	29,723	66.2	1,720,606	674,214	486	4	169	25.6
Northwestern Region:													
Chicago & North Western	1940	8,319	848,202	883,646	16,317	25,648	61.2	1,688,426	628,376	298	47	263	43.3
	1939	8,326	821,916	847,752	16,857	24,251	62.7	1,540,984	582,048	308	66	289	43.6
Chicago Great Western	1940	1,447	241,144	242,367	5,298	6,901	61.2	438,576	156,202	62	6	21	23.6
	1939	1,450	247,786	250,411	7,104	7,006	61.6	442,057	157,735	67	3	18	20.5
Chi., Milw., St. P. & Pac.	1940	10,874	1,210,502	1,259,965	57,648	35,673	61.2	2,342,656	946,866	418	72	122	19.9
	1939	10,934	1,217,204	1,265,689	49,366	34,208	61.2	2,230,997	886,993	433	66	159	24.2
Chi., St. P., Minneap. & Om.	1940	1,619	213,343	220,781	9,964	4,900	63.3	312,541	117,265	97	27	14	10.1
	1939	1,619	207,790	216,022	9,577	4,693	64.8	294,280	113,642	105	20	16	11.3
Great Northern	1940	7,973	857,514	852,324	26,915	29,749	58.6	2,251,008	1,008,791	324	55	144	27.5
	1939	7,976	771,853	766,141	25,209	26,816	59.9	1,941,933	828,402	338	49	160	29.3
Minneap., St. P. & S. St. M.	1940	4,250	391,525	395,648	4,187	9,462	62.7	590,920	248,469	114	..	11	8.8
	1939	4,265	358,908	364,326	3,440	8,516	64.0	504,659	198,735	105	..	31	22.8
Northern Pacific	1940	6,423	682,314	722,267	40,789	22,807	66.0	1,424,574	573,972	305	48	87	19.8
	1939	6,423	636,793	668,303	35,370	21,640	67.5	1,333,770	534,853	324	20	96	21.8
Central Western Region:													
Alton	1940	914	213,858	229,911	1,165	4,725	63.3	313,312	121,284	66	6	10	12.2
	1939	914	227,333	244,388	1,377	4,915	58.5	339,926	127,875	59	10	21	23.3
Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.)	1940	13,414	2,036,937	2,182,972	106,671	57,729	59.7	3,959,635	1,355,127	629	49	159	19.0
	1939	13,447	1,990,895	2,148,405	97,474	56,738	60.0	3,857,768	1,316,551	630	41	223	24.9
Chicago, Burl. & Quincy	1940	8,924	1,091,893	1,111,175	45,873	32,150	63.4	2,078,400	849,615	406	48	92	16.8
	1939	8,854	1,102,612	1,143,571	41,202	31,580	64.1	1,999,657	809,964	424	49	83	14.9
Chi., Rock I. & Pac.	1940	7,876	1,117,805	1,148,125	12,027	27,338	59.1	1,816,681	704,436	326	43	170	31.5
	1939	7,830	1,094,460	1,129,375	8,599	26,805	60.1	1,737,507	655,312	331	87	144	25.6
Denver & Rio Gr. Western	1940	2,554	272,696	303,784	32,913	7,969	65.2	519,089	208,465	123	42	21	11.3
	1939	2,555	250,556	274,463	26,640	6,922	65.6	442,622	175,985	133	33	29	14.9
Southern Pac.—Pac. Lines	1940	8,535	1,528,926	1,648,834	189,008	51,601	60.9	3,417,255	1,159,065	619	24	132	17.0
	1939	8,554	1,453,029	1,582,255	184,501	48,393	60.7	3,181,283	1,052,439	553	22	180	23.8
Union Pacific	1940	9,889	1,932,805	2,002,480	113,191	59,060	59.0	3,878,376	1,316,961	549	44	236	28.5
	1939	9,899	1,842,649	1,910,579	103,339	57,150	61.6	3,660,314	1,244,155	553	45	268	30.9
Southwestern Region:													
Mo.-Kansas-Texas Lines	1940	3,281	406,660	409,582	6,004	9,327	60.8	592,933	221,012	84	..	95	53.1
	1939	3,282	404,781	408,154	5,590	9,834	62.0	614,743	233,639	87	..	117	57.4
Missouri Pacific	1940	7,120	1,098,785	1,136,161	22,803	30,014	62.6	1,972,989	790,732	373	72	75	14.4
	1939	7,124	1,038,291	1,069,610	23,104	28,600	63.2	1,816,317	709,009	361	56	120	22.3
Texas & Pacific	1940	1,882	247,246	247,246	1,428	7,593	63.7	471,171	168,209	64	27	98	51.9
	1939	1,932	256,169	256,194	1,550	8,008	62.7	489,019	170,160	63	12	111	59.7
St. Louis-San Francisco	1940	4,778	636,110	646,184	8,397	14,215	60.2	934,205	376,053	266	59	32	9.0
	1939	4,784	693,508	700,223	9,302	14,226	61.5	909,789	361,015	251	54	33	9.8
St. Louis Southw. Lines	1940	1,633	243,678	244,631	3,102	6,530	68.2	375,732	126,445	73	22	17	15.2
	1939	1,673	238,564	239,371	3,132	6,199	63.4	371,286	133,143	67	35	13	11.3
Texas & New Orleans	1940	4,415	569,128	569,129	4,555	12,717	63.1	823,872	316,403	199	12	49	18.8
	1939	4,415	527,540	527,566	3,442	12,026	62.0	776,819	288,211	206	23	49	17.6

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

1940, Compared with July, 1939, for Roads with Annual Operating Revenues Above $25,000,000

Region, road, and year	Number of freight cars on line: Home	Foreign	Total	Per cent unserviceable	Gross ton-miles per train-hour, excluding locomotives and tenders	Gross ton-miles per train-mile, excluding locomotives and tenders	Net ton-miles per train-mile	Net ton-miles per loaded car-mile	Net ton-miles per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles, including locomotives and tenders	Locomotive miles per locomotive-day
New England Region:													
Boston & Albany 1940	875	4,444	5,319	1.8	21,364	1,288	462	21.4	357	26.2	5,429	147	59.7
1939	1,128	3,994	5,122	3.5	20,781	1,256	432	19.5	321	25.2	4,483	146	51.0
Boston & Maine 1940	4,906	6,664	11,570	5.8	27,823	1,955	740	21.8	534	36.5	3,489	93	66.5
1939	6,123	6,440	12,563	7.1	27,020	1,917	703	20.5	436	31.0	2,942	94	57.0
N. Y., New Hav. & Hartf. 1940	7,279	10,495	17,774	4.7	29,006	1,994	748	21.4	453	32.8	4,420	99	65.5
1939	7,211	10,998	18,209	8.5	28,818	1,939	705	20.2	413	31.5	3,982	95	58.7
Great Lakes Region:													
Delaware & Hudson 1940	8,229	3,526	11,755	3.7	32,890	2,149	999	30.1	654	35.3	9,322	109	49.3
1939	8,433	3,040	11,473	5.2	32,399	2,110	977	28.7	566	30.6	7,758	104	41.1
Del., Lack. & Western 1940	11,138	5,496	16,634	7.2	37,821	2,123	845	24.0	552	34.7	9,303	118	72.3
1939	12,243	5,141	17,384	13.9	36,114	1,989	769	22.1	444	29.2	7,993	119	65.7
Erie (incl. Chi. & Erie) 1940	14,879	13,451	28,330	3.2	48,425	2,791	1,058	24.4	822	53.0	10,303	85	64.6
1939	17,546	10,595	28,141	6.1	46,862	2,695	959	21.7	686	48.6	8,319	88	52.3
Grand Trunk Western 1940	5,128	5,993	11,121	8.5	35,522	1,797	637	22.1	402	29.5	4,092	87	74.9
1939	4,877	4,972	9,849	11.8	33,854	1,675	577	21.4	401	30.7	3,691	88	70.8
Lehigh Valley 1940	9,674	8,537	18,211	1.8	46,795	2,503	1,068	27.8	577	32.4	8,606	99	62.7
1939	9,924	6,837	16,761	2.5	46,247	2,478	1,004	24.8	512	31.4	6,890	101	51.1
New York Central 1940	86,587	57,820	144,407	11.5	38,621	2,307	986	29.8	570	32.2	7,712	92	77.8
1939	90,138	59,385	149,523	19.7	38,463	2,267	949	28.5	469	27.5	6,629	92	66.2
N. Y., Chicago & St. Louis 1940	6,185	8,920	15,105	3.2	41,765	2,246	834	23.4	921	63.4	8,024	80	90.0
1939	6,654	7,852	14,506	4.1	41,665	2,183	785	21.8	825	60.0	7,046	79	84.0
Pere Marquette 1940	8,939	6,650	15,589	3.4	29,823	1,710	663	26.0	460	29.5	3,335	87	76.8
1939	9,979	5,731	15,710	4.6	29,327	1,665	648	25.9	420	26.9	3,098	87	71.6
Pittsburgh & Lake Erie 1940	13,014	5,437	18,451	24.4	50,341	3,658	2,109	50.7	319	10.3	24,562	69	46.0
1939	9,434	7,846	17,280	39.3	53,349	4,021	2,294	50.1	267	8.9	19,989	83	30.0
Wabash 1940	12,321	9,691	22,012	6.3	38,882	1,946	717	22.9	582	39.8	5,279	103	73.9
1939	13,416	9,071	22,487	12.2	37,888	1,885	646	21.1	525	39.8	4,854	104	73.0
Central Eastern Region:													
Baltimore & Ohio 1940	55,887	27,634	83,521	9.4	31,767	2,310	1,047	32.4	624	31.8	8,305	126	61.3
1939	57,668	26,044	83,712	19.2	31,337	2,268	1,017	31.3	543	28.3	7,139	124	53.5
Central of New Jersey 1940	7,278	10,271	17,549	14.2	29,719	2,371	1,124	33.9	300	14.8	8,278	118	61.4
1939	10,021	9,990	20,011	30.7	28,991	2,299	1,091	32.9	242	11.9	7,188	125	53.0
Chicago & Eastern Illinois 1940	3,144	3,181	6,325	7.8	29,051	1,542	652	26.8	565	32.6	3,905	117	64.9
1939	3,375	2,966	6,341	8.5	28,682	1,523	654	26.3	543	30.5	3,713	111	60.5
Elgin, Joliet & Eastern 1940	9,405	6,097	15,502	3.2	19,159	2,050	991	38.3	225	10.2	8,544	106	64.1
1939	8,005	2,762	10,767	5.3	16,918	1,818	855	35.6	205	9.7	5,778	108	46.0
Long Island 1940	136	3,127	3,263	1.1	5,684	748	279	28.4	78	5.4	621	312	43.7
1939	286	3,049	3,335	5.2	5,693	831	322	30.1	72	4.7	615	330	40.3
Pennsylvania System 1940	184,230	60,102	244,332	15.3	39,003	2,716	1,213	31.9	476	24.9	11,791	101	65.8
1939	199,694	52,688	252,382	23.3	40,416	2,664	1,154	29.4	366	20.2	9,229	100	53.0
Reading 1940	23,110	11,493	34,603	17.9	28,060	2,159	1,045	35.6	399	18.5	9,533	127	51.6
1939	26,822	9,670	36,492	27.3	28,172	2,097	1,000	34.4	322	15.4	8,080	120	43.4
Pocahontas Region:													
Chesapeake & Ohio 1940	44,986	14,200	59,186	1.9	59,058	3,966	2,171	46.7	1,055	40.5	20,643	64	70.8
1939	44,515	12,230	56,745	3.0	60,322	4,050	2,200	47.2	1,032	39.4	19,535	64	62.0
Norfolk & Western 1940	36,652	5,655	42,307	2.1	60,977	3,931	2,069	44.8	1,049	41.1	20,538	80	73.5
1939	34,842	5,016	39,858	4.4	56,867	3,703	1,944	44.3	975	38.6	18,249	83	67.8
Southern Region:													
Atlantic Coast Line 1940	13,437	5,362	18,799	19.2	22,598	1,203	444	22.1	424	30.3	1,604	108	57.9
1939	14,918	6,715	21,633	20.9	21,842	1,169	411	20.4	333	25.8	1,414	106	50.8
Central of Georgia 1940	4,574	2,898	7,472	2.1	22,932	1,176	429	21.2	485	34.2	2,144	116	85.7
1939	4,363	2,309	6,672	1.9	22,906	1,167	445	21.0	465	31.0	1,909	116	72.2
Illinois Central (incl. Y. & M. V. 1940	30,092	12,957	43,049	4.0	31,398	1,876	753	26.4	665	42.0	4,408	114	52.7
1939	29,274	14,502	43,776	4.0	30,090	1,811	724	25.2	613	39.0	4,021	122	46.9
Louisville & Nashville 1940	37,434	9,859	47,293	11.7	29,039	1,773	842	34.2	643	32.1	6,283	112	86.0
1939	37,222	8,615	45,837	22.4	28,633	1,732	824	33.5	584	29.2	5,607	114	71.4
Seaboard Air Line 1940	10,923	5,750	16,673	3.7	26,158	1,470	566	23.9	558	37.8	2,196	118	63.6
1939	10,700	4,340	15,040	4.4	25,022	1,447	561	22.4	544	36.2	1,956	115	58.5
Southern 1940	22,700	18,254	40,954	9.1	24,132	1,346	532	23.5	573	37.6	3,581	130	74.6
1939	22,841	17,287	40,128	11.5	23,784	1,336	524	22.7	545	36.3	3,282	129	68.2
Northwestern Region:													
Chicago & North Western 1940	33,083	20,696	53,779	10.1	31,020	2,040	759	24.5	375	25.0	2,437	104	52.7
1939	37,609	20,226	57,835	9.6	30,385	1,948	736	24.0	334	22.2	2,255	101	46.2
Chicago Great Western 1940	2,386	3,576	5,962	1.4	33,667	1,823	649	22.6	868	62.7	3,482	109	98.1
1939	2,411	3,183	5,594	2.2	33,355	1,790	639	22.5	909	65.5	3,509	115	98.4
Chi., Milw., St. P. & Pac. 1940	42,749	18,628	61,377	3.0	32,607	1,948	787	26.5	499	30.7	2,809	107	76.2
1939	44,214	17,872	62,086	2.8	30,381	1,845	733	25.9	468	29.5	2,617	108	70.4
Chi., St. P., Minneap. & Om. 1940	3,092	5,694	8,786	7.1	20,109	1,477	554	23.9	432	28.5	2,336	101	58.5
1939	3,155	4,992	8,147	10.6	19,708	1,433	553	24.2	438	27.9	2,264	97	55.5
Great Northern 1940	33,769	10,091	43,860	5.5	41,964	2,639	1,183	33.9	749	37.7	4,081	86	58.7
1939	36,935	10,808	47,743	5.9	37,940	2,526	1,077	30.9	573	31.0	3,350	93	52.1
Minneap., St. P. & S. St. M. 1940	12,025	4,284	16,309	4.0	25,134	1,513	636	26.3	487	29.6	1,886	92	103.3
1939	12,854	4,031	16,885	8.0	23,731	1,409	555	23.3	386	25.8	1,503	92	88.8
Northern Pacific 1940	28,851	6,620	35,471	7.3	35,921	2,099	846	25.2	524	31.6	2,883	119	60.8
1939	30,517	5,977	36,494	12.0	33,460	2,106	844	24.7	472	28.3	2,686	125	56.5
Central Western Region:													
Alton 1940	1,528	5,874	7,402	6.0	37,149	1,476	571	25.7	541	33.3	4,281	116	95.5
1939	1,717	6,447	8,164	12.9	35,680	1,510	568	26.0	525	34.5	4,513	107	92.8
Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.) 1940	69,423	12,365	81,788	9.1	38,310	1,951	668	23.5	527	37.6	3,259	106	92.7
1939	75,100	12,460	87,560	11.8	37,480	1,946	664	23.2	483	34.7	3,158	106	85.4
Chicago, Burl. & Quincy 1940	27,635	15,815	43,450	5.6	32,896	1,912	781	26.4	633	37.8	3,071	100	73.4
1939	29,428	14,574	44,002	8.2	30,905	1,822	738	25.6	587	35.7	2,951	101	73.1
Chi., Rock I. & Pac. 1940	19,266	11,629	30,895	5.8	30,226	1,630	632	25.8	694	45.6	2,885	104	73.7
1939	20,329	10,145	30,474	5.9	29,027	1,591	600	24.4	644	43.8	2,700	110	68.9
Denver & Rio Gr. Western 1940	11,696	5,244	16,940	3.4	32,298	1,910	767	26.2	419	24.5	2,633	145	62.8
1939	12,644	4,188	16,832	2.8	29,488	1,771	704	25.4	347	20.8	2,222	146	53.8
Southern Pac.—Pac. Lines 1940	28,230	29,125	57,355	4.8	37,521	2,255	765	22.5	651	47.6	4,381	93	82.0
1939	31,054	27,271	58,325	5.3	36,652	2,210	731	21.7	583	44.2	3,969	93	79.9
Union Pacific 1940	32,623	22,597	55,220	6.7	44,399	2,020	686	22.3	796	60.5	4,276	112	85.3
1939	38,093	22,632	60,725	12.8	43,387	2,000	680	21.8	685	51.0	4,054	112	78.4
Southwestern Region:													
Mo.-Kansas-Texas Lines 1940	5,283	3,234	8,517	7.1	28,652	1,462	545	23.7	799	55.5	2,173	81	80.7
1939	5,240	3,530	8,770	4.4	29,658	1,526	580	23.8	803	54.5	2,296	81	69.8
Missouri Pacific 1940	18,075	16,484	34,559	2.6	31,847	1,805	723	26.3	738	44.8	3,583	109	77.3
1939	18,496	16,845	35,341	2.4	31,065	1,761	688	24.8	631	40.3	3,210	110	70.9
Texas & Pacific 1940	2,933	3,303	6,236	2.2	37,924	1,908	681	22.2	880	62.4	2,883	79	45.5
1939	3,156	3,825	6,981	2.5	37,897	1,912	665	21.2	792	59.4	2,841	82	48.4
St. Louis-San Francisco 1940	16,893	4,797	21,690	2.2	28,817	1,472	592	26.5	549	34.5	2,539	109	63.2
1939	17,172	4,084	21,256	5.0	26,501	1,316	522	25.4	522	33.4	2,434	116	71.6
St. Louis Southw. Lines 1940	2,469	2,585	5,054	2.7	32,486	1,544	520	19.4	789	59.7	2,498	86	75.7
1939	2,413	2,289	4,702	2.6	31,785	1,558	559	21.5	875	64.3	2,567	86	71.7
Texas & New Orleans 1940	5,711	8,538	14,249	5.3	28,151	1,458	560	24.9	682	43.4	2,312	87	74.9
1939	6,291	9,360	15,651	5.5	28,563	1,481	549	24.0	569	38.3	2,106	85	65.7

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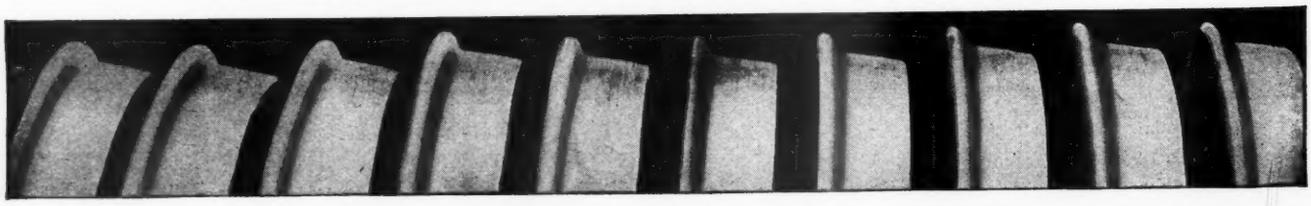
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